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THESIS

NAVAL SPECIAL WARFARE - LEADING ORGANIZATIONAL CHANGE

by

Robert A. Newson

December 2000

Thesis Co-Advisors: Gordon McCormick
Ken Hagan

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This thesis examines organizational transformation, utilizing Naval Special Warfare (NSW) as a model for DOD-wide organizational change. The broader context of the revolution in military affairs (RMA) highlights the unique role of special operations forces in general and NSW specifically regarding innovation and adaptation in the military and its diffusion to conventional forces.

Four elements – technological change, systems development, operational innovation, and organizational adaptation – compromise a revolution in military affairs. Although technological change and systems development have made significant impacts upon military affairs, operational innovation and organizational adaptation are lacking. Organizational adaptation responding to information age realities – changing geo-political and social circumstances as well as rapidly advancing technology – is necessary to achieve the predicted revolution in military affairs. A transformation from a rigid hierarchical organization to a collaborative network of stakeholders is recommended.

Speed, agility, integration, and innovation are necessary success factors in the 21st century. In order to achieve these attributes military organizations must leverage resources across hierarchal, functional, command, and social boundaries. This will require a long-term transformation effort.

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NAVAL SPECIAL WARFARE – LEADING ORGANIZATIONAL CHANGE

Robert A. Newson
Lieutenant Commander, United States Navy
B.S., University of Kansas, 1989

Submitted in partial fulfillment
of the requirements for the degrees of

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DEFENSE ANALYSIS

and

MASTER OF ARTS
IN
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December 2000

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A crazy Master Chief asked and answered a simple question when I was an Ensign. He said, "Ensign, Who will help you?" Before I could reply he answered, "Anyone you ask." He was making a simple point about Naval Special Warfare, the Navy, and the military. All you have to do is ask. People are more than willing to lend a hand.

I am forever grateful for the assistance, mentoring, and encouragement I have received while writing this thesis. First and foremost, I must thank Professor Ken Hagan, editor extraordinaire. At the tip of his red pen I learned how to become a better writer. His wit, humor, and insight were always appreciated. Professor Barry Frew and his staff at the NPS Center for Executive Education influenced this thesis a great deal. Through the Under Secretary of the Navy's 30-Something Course they challenged me to look at the Navy and myself differently and see the possibilities and opportunities that await us. Through their executive education courses they are changing the Navy one person at a time. I am fortunate and grateful to have met them. The professors and staff of the Special Operations / Low Intensity Conflict Curriculum made going to class worthwhile. The educational experience was outstanding.

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I. INTRODUCTION

A. PURPOSE OF THESIS

This thesis proposes an alternative perspective and unconventional program for Naval Special Warfare (NSW) organizational adaptation. It recommends a proactive transformation to a collaborative, networked organization that prepares NSW for both the promise and the peril of a chaotic and unsettled 21st century. It answers two primary questions:

1) In the future, how can Naval Special Warfare best translate strengths and capabilities into high-value service to Theater Commanders?

2) What changes are required to prepare Naval Special Warfare for the future?

The relevance of this thesis reaches far beyond the Naval Special Warfare community. Naval Special Warfare influences and is influenced by numerous stakeholders; a stakeholder is "any group or individual who can affect or is affected by the achievement of an organization's purpose." (Roberts and King, pp. 64-5) Key stakeholders in, and contributors to, the future of Naval Special Warfare include the United States Congress, the United States Navy, the United States Special Operations Command and its components, the Assistant Secretary of Defense for Special Operations / Low Intensity Conflict, Theater Commanders in Chief, Theater Special Operations Commands, Numbered Fleets, and other governmental agencies, as well as the Naval Special Warfare Community. These participants in the development and utilization of Naval Special Warfare are the intended audience of this paper.

Without a common frame of reference, shared understanding, and cooperative synchronization among this complex group of stakeholders, the strategic effects of Naval Special Warfare's future innovations and adaptations will fall short of their far-reaching potential.

B. GEOSTRATEGIC BACKGROUND

This thesis is, in part, a response to a decade of national reflection, an ongoing period of introspection and speculation on future threats, and opportunities initiated since the end of the Cold War. Since the twilight of the 20th century Naval Special Warfare has been searching for answers to some difficult questions: What will make NSW significant to the country in the future? In what way can it maximize its contribution to the nation? If it is truly the best (at what?), what makes it the best and why should that be important to anyone but Naval Special Warfare? These questions are important because the certainty of the Cold War period has given way to the growing uncertainty of an age combined with chaos and order. (See Hock.) A collective pursuit of these questions and others like them, ideally, will establish an appreciation, organization-wide, that declares, "this is who we are; this is what we stand for; this is what we're all about." (Collins and Porras, p. 54); this organizational self-knowledge is a necessary foundation to address changing or threatening circumstances.

1989 marked the beginning of the end of the Cold War. On November 9, 1989, the Berlin Wall ceased to exist as a barrier between the East and the West. By year's end East Germany, Czechoslovakia, and Romania followed Hungary and Poland in abandoning communism.

"It was one of those times, according to *Time* magazine, when the tectonic plates of history shift beneath men's feet, and nothing after is quite the same." (Clifford, Hagan, and Paterson, p. 462) Within two years, the Soviet Union imploded and the Cold War abruptly receded into history. Hopes for an era of peace and a "New World Order" following the release of five decades of Cold War tension were short-lived. Long suppressed ethnic and nationalist tensions quickly surfaced. Issues and causes buried under the immense weight of the Cold war were no longer suppressed. "The United States ... [now] faced a global agenda of unusual complexity." (Clifford, Hagan, and Paterson, p. 504) It no longer faced a monolithic opponent and possessed neither an overarching cause nor a comprehensive strategy. The United States, as the sole remaining superpower, pursued piecemeal interventions around the globe. The Balkans, Somalia, Haiti, Iraq, and Kosovo drew military responses from the United States. These operations raised significant questions concerning the focus and role of the United States military. The military's search for relevance and viability in a changing world that began a decade ago continues today.

1. An Altered Strategic Environment

This search for relevance and viability is a direct response to shifting currents and dominant trends unleashed by the ending of the Cold War and the dawning of the information age. These global trends are altering the current and future strategic environment.

Economic warfare, the proliferation of weapons of mass destruction, new forms of terrorism and political violence, increasingly active and menacing drug cartels and organized criminal alliances, threatening rogue-states, multiplying low-intensity and ethno-national conflicts and the mass migrations they cause, expanding peace operations, and significant changes brought on by the information revolution have created a new strategic landscape.

2. Responding to a New World

The end of the Cold War has inspired a Department of Defense-wide search for relevance in an undefined, emerging, new world. In the absence of a direct superpower competitor, all the services within the Department of Defense have been groping to redefine or adjust their operational focus. Conventional forces have sought to adapt to the post-Cold War era, in part, by becoming smaller, more responsive, and more specialized. In short, they have adapted to the new environment by attempting to become more like Special Operations Forces.

This wider response to the changing geostrategic environment cannot fail to influence the future of Naval Special Warfare. In the midst of this rapidly changing operational environment, other Special Operations Forces, conventional forces, and technological advances are significantly affecting Naval Special Warfare's historic mission focus and competitive advantage. Currently, multiple challengers compete for segments of Naval Special Warfare's present niche, even as the relevance and viability of legacy niche areas appear to be declining. For example, both traditional support for amphibious operations, a unique and unmatched Naval Special Warfare capability, and many special reconnaissance missions have shifted to remote sensors or declined in

importance because of changing technology and tactics. "Operational Maneuver From The Sea," the U.S. Marine Corps' emerging operational doctrine[1], refocuses amphibious operations from a waterborne assault designed to create a beachhead, to deeper inland insertions, even bypassing the beaches when feasible. Unmanned Aerial Vehicles (UAVs) and spaced based reconnaissance platforms have decreased the need for manned reconnaissance.

Despite the uncertainty created by the end of the Cold War and the dawning information age, one thing is clear: with continued geostrategic and technological change the current strategic position of Naval Special Warfare is unlikely to fully meet the needs of the future. Choices that are made or delayed today will directly impact on the national security and the future relevance and utility of Naval Special Warfare. Proactive preparation today is pitted against hasty reaction tomorrow. The paths to the future are being walked today. "Which path at what cost?" is the question scrawled over that entrance to the 21st century.

C. WHICH PATH AT WHAT COST

As General Peter Schoomaker, USA, has noted, Special Operations Forces (SOF) can do almost anything; however, SOF should not do some things that detract from its core ideology, its primary values and purpose; and it will not do other things, that are ethically or morally wrong[2]. Given the constraints of Naval Special Warfare's small size, the vast spectrum of employment possibilities, the changing environment, the shifting requirements of the 21st century, and the burning desire common to all military professionals to meet the needs of the nation with his or her unique capabilities, an

---

[1] See Marine Corps Concept Paper *Operational Maneuver From The Sea* at http://www.concepts.quantico.usmc.mil/omfts.htm.
[2] USSOCOM (2000) CINCSOC Command Philosophy, PowerPoint Brief.

inescapable truth cannot be denied – nobody can do it all. Special Operations Forces will remain a scarce asset. This fact is especially critical for Naval Special Warfare, the smallest of all U.S Special Operations Command components. Focusing on one mission area often requires forsaking another, either consciously or by default. The desire to meet the need, any need, of the day must be balanced with the realization that the opportunity costs in capabilities and readiness compound rapidly. The increased employment opportunities of the generalist compete against the unmatched, if more narrowly focused, skills of the specialist. The Jack-of-all-trades competes against the master of a few unique mission areas; one specialty focus competes against another. These competing choices affect internal Naval Special Warfare decisions and the external competition for scarce resources, missions, and ultimately, viability and relevance. This reality has stimulated serious self-analysis and introspection within Naval Special Warfare. Difficult choices are required. However, in the midst of difficulty these decision points promise untapped opportunity. The findings of this thesis suggest a collaborative process that expands participation in decision-making and closely links organizational planning, with implementation and implementers.

D. FINDINGS

This thesis addresses organizational change. It is based upon the principle that organizations must change, as necessary, to fit their environment. Traditional rational organizational change, also termed strategic management, can be defined by thee axioms: (1) form follows function; (2) function is defined by requirements; (3) requirements are determined by both external and internal factors. Traditional strategic management, however, has a difficult time in the face of uncertainty; uncertainty

makes future requirements hard to forecast. The dilemma is clear. Uncertainty makes it hard to anticipate required changes, yet organizations must anticipate emerging threats and opportunities and initiate timely and appropriate preparations in order to succeed.

Coping with this uncertainty and creating the organizational flexibility to respond to the dynamics of rapid change will be the keys to Naval Special Warfare's relevance in the early 21st century. Collaboration among NSW stakeholders can develop an increased understanding of external and internal organizational factors as well as develop a shared perspective that can more efficiently define both function and form and adapt them to altered circumstances. Rapid feedback, common in collaborative networks, creates a new depth and breadth of understanding and speeds organizational reactions.

Significant change combined with increased complexity, ambiguity, interconnectedness, and chaos are increasingly part of the organizational landscape of the information age. In order to cope with these factors Naval Special Warfare must adapt its organizational processes, move away from a bureaucratic, hierarchical, industrial-age organization and transform itself into a collaborative network of stakeholders.

This thesis is more about general insights into what must be done, rather than about proposing a detailed plan of what specifically to do. Only collaboration among NSW stakeholders will determine the most appropriate and most acceptable specific actions.

E. THESIS OUTLINE

Consistent with the implications and findings from two years of wide-ranging thesis research and quite unintentionally, this thesis is non-linear. It is not a straightforward story with a beginning, middle, and end. It is a composite of inquiries into the how and why of organizational transformation, from alternative and various perspectives. Each chapter might stand alone in its analysis of the motivations for and the context of organizational change. Yet each chapter relates, interacts, and is interconnected with the others in ways too numerous to measure. Starting from different analytical positions, each chapter repeatedly returned to the same conclusions: increased organizational flexibility and adaptability will be essential attributes in the information age and wide-range collaboration is the mechanism to achieve these attributes. Tom Peters, best selling author and management guru, summarized this collaborative necessity in his book Thriving on Chaos, "Everyone must innovate. Everyone must be prepared (1) to contribute ideas and (2) work together with less supervision." (Peters, p. 324)

Chapters I-III provide an analysis of systemic geopolitical and military trends. Together they highlight the need for adaptive change. Following the current introductory chapter, Chapter II examines key issues within the revolution in military affairs (RMA) and highlights the lack of attention paid to operational innovation and organizational adaptation. Chapter III provides a summary and synthesis of a variety of wide-ranging observations and projections made by contemporary strategists concerning future warfare and the strategic environment in the early 21st century.

Chapter IV examines the organizational implications of dominant information age factors – chaos, turbulence, and interconnectedness. It also introduces the concept of wicked problems, a new class of problems resistant to conventional problem solving. It draws from current business literature concerning a chaotic and rapidly changing competitive environment – these changes include shifting perceptions, advancing technology and the social responses they release. It explores how organizations can cope with these altered realities and how they need to adapt to excel in the information age.

Chapter V examines alternative strategic planning perspectives and cognitive frames. These frames of reference affect the processes and structure of organizations and their ultimate fitness within a new, information-age organizational landscape. It argues for a transition from the Department of Defense's narrow strategic management perspective, which reflects a formal, bureaucratic, and hierarchical process designed for a vanished stable and predicable environment. It recommends an approach that combines multiple strategic schools into a hybrid process more appropriate during the dynamic and unpredictable times of the early 21st century.

The insights from these varied perspectives, Chapters I-V, combine into a critical information-age focal point – organizational flexibility and adaptability through collaborative processes. Chapter VI builds upon the previous chapters and describes a framework from which to pursue organizational transformation, a transformation from a hierarchical and unresponsive industrial-age organization in to a flexible, adaptive information-age organization. Chapter VII applies the framework to Naval Special Warfare and proposes specific actions to begin the process of adaptation and transformation. The intent of Chapter VII, and this thesis, is not to propose a plan or a

solution to any specific problem but, instead, to suggest a process, a more appropriate approach to organizational adaptation and problem solving.

Chapter VIII concludes the thesis with an admonition for every member of the Department of Defense to step away from the illusions of control and the implicit organizational assumptions, rooted in a bygone era, that inhibit appropriate adaptation. DOD cannot cling to the past and simultaneously step into the future. Transformation ultimately requires stepping into an unknown and uncertain future with only the commitment to learn and the flexibility to adapt.

F. TERMINAL GUIDANCE

The reader should keep three questions in the back of his mind while he reads this assessment. I learned this, one of the most valuable lessons of my life, from a pediatric neurologist who was treating my daughter for recurring migraine headaches. There are three questions he told my little eight year old that should guide your decisions and actions no matter where you are in life or what you are doing:

(1) **What do I want**?
(2) **How bad do I want it**?
(3) **What am I willing to give up to get it**?

These simple questions are significant. They were significant to her because first she had to decide how badly she wanted to be rid of those headaches and then determine what she was willing to give up to get what she wanted. In one of many tough decisions she will face in her life, she had to decide whether to abandon pizza and macaroni and cheese, two of the staples of her childhood cuisine, in exchange for relief from her migraines. Dad would not always be around and it was up to her to stick to her doctor-

prescribed diet or give in to temptation[3]. Even when the choices are straightforward, implementation is not necessarily easy!

What do you want? How badly do you want it? What are you willing to give up to get it? These questions, applied to the future of Naval Special Warfare, are vital to the entire audience of this thesis, from Theater Commanders in Chief to the Commander in Chief Special Operations Command down to all the members of the Naval Special Warfare community. This thesis provides a foundation for further examination of these issues. Until a common frame of reference and shared understanding concerning Naval Special Warfare's utility and focus in the 21st century are developed, other, less significant, questions will continually demand and divert attention. The ultimate purpose of this thesis is to keep its audience focused on the larger questions of cost, benefit, and commitment.

[3] She followed her diet, finished her treatment, and has been migraine free for several years.

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II. RMA AND THE MISSING LINKS

This chapter examines the coming information age revolution in military affairs (RMA) and provides an overview of factors influencing the RMA and discusses dominant themes within contemporary RMA literature.

A. PROPHESIES OF REVOLUTION

International debate concerning a revolution in military affairs has taken place for more than two decades. It began in the Soviet General Staff in the late 1970s and the early 1980s and migrated to the United States national security arena in the mid-to-late 1980s. Serious forecasts have solidly framed the debate and fantastic predictions have expanded its fringes. The significant changes in the post-Cold War geopolitical environment, combined with the changes brought on by the information revolution within business, the military, and society as a whole, are reshaping the world. It is no longer a question of "if" but "when" this combined change will revolutionize future conflict. Andrew Krepinevich, director of the Center for Strategic and Budgetary Assessments, provides a four-point list of prerequisites for a revolution in military affairs: "technological change, systems development, operational innovation, and organizational adaptation." (Krepinevich, p. 30)

By this measure, fuel for the revolution is accumulating but the revolutionary fire has yet to ignite. Technological change has been significant, in both quantity and pace, over the past several decades – precision strike, reconnaissance, and information processing are a few examples. This advancement in technology has initiated a military-

technical revolution (MTR), often a precursor to a revolution in military affairs, but not a RMA in itself. Systems development may have hit its conceptual stride in the late 1990's, and initial implementation and refinement will likely occur early in the 21st century, with, for example, "systems of systems," the Navy's network-centric warfare, and the Army's Force XXI battle systems. However, operational innovation and especially organizational adaptation have yet to occur in significant measure. When they do the revolution in military affairs will dramatically reshape the future security environment and alter future conflict like a force of nature. Organizational adaptation, a critical RMA factor and perhaps the most difficult to achieve, is the focus and theme of this thesis.

B. RMA TYPOLOGY

Jeffery Cooper, Director of the Center for Information Strategy and Policy, Science Applications International Corporations, studying past revolutions in military affairs, has identified three distinct types of revolutions, driven alternatively by technology, strategic intent, and significant social change.

1. Technology-driven Change

The technological revolution is best characterized by the nuclear/long-range strike revolution of the 1940s and 1950s. As this example demonstrates, the revolutionary technology is developed independent of strategic requirements and the strategic purpose and application of the new technology are later developed.

2. Strategy-driven Change

The strategic-intent revolution is driven by an operational and organizational innovation designed to solve a strategic impasse. The German Blitzkrieg of World War II, designed to overcome the deadly stalemate of trench warfare, is an example of this type of revolution.

3. Social-driven Change

The Napoleonic RMA of 1793-1815 exemplifies RMAs that are a response to significant social upheaval. Social-driven RMAs are propelled by fundamental economic, political, and social changes lying outside the immediate military domain. (See Cooper, pp. 118-119.)

4. Multifaceted Change

These past revolutions in military affairs were primarily fuelled by a single dominant stimulus, but the coming information age revolution may be advanced and affected by all three of the revolutionary drivers identified by Cooper. Revolutionary possibilities are abundant in information and sensor technology, developments in information warfare, as well as advances in precision strike and the use of space. These technological advancements raise the question, "What are the best ways to apply these technologies and to what strategic purposes can they be applied?" This implies a technology-driven revolution.

However, responding to strategic realities imposed by this advancing technology could just as likely propel a strategy-driven revolution. Rapidly proliferating technologies, including sophisticated sensors and "brilliant" weapons, threaten to counter the platform-centric, massed force dominance the United States now enjoys. These

developments raise the possibility of the dominance of the defense, similar to the post-World War I strategic dilemma that was eventually countered by the innovation of the combined-arms Blitzkrieg. This possibility has led some RMA theorists to highlight the need for operational and organizational innovation as a counter to a potential defensive ascendancy. "The information revolution is not solely or mainly about technology; it is an organizational as well as a technological revolution." (Arquilla and Ronfeldt, p. 5) It is clear that some theorists are focusing as much on strategic needs as they are on the development of revolutionary technology. As Cooper points out, "An RMA involves a new appreciation of both 'strategic needs' and 'strategic opportunities.' The combination of these two conditions presents the opportunity for new problems to be solved, whether or not they have previously even been recognized as problems, what might be called "latent demand." (Cooper, p. 120)

The information revolution, in addition to its technological and strategic influence, is fostering significant economic, political and social changes that will continue independent of any military, technological, operational, or organizational advances; a social-driven RMA may result. The coming revolution will therefore be a response to a socially, economically, and politically transformed world; simultaneously, it will receive thrust and direction, perhaps conflicting direction, from technological and strategic revolutionary influences.

C. DOMINANT ISSUES

Three recurring issues dominate contemporary RMA literature: the direction and pace of revolutionary change, and the role of information in future conflict. They are critical to the course and ultimate outcome of the coming revolution.

1. Direction of Change

Because the approaching RMA is powered by all three of Cooper's revolutionary motivations and/or influences (technology, strategic intent, and social changes), it is not surprising that a recurring theme in the current RMA discourse concerns the ultimate focus and direction of the revolution. Is it about a revolutionary process or a transformed purpose? Is it about developing revolutionary means (technology) to achieve current objectives, or is it about radically altered ends? Is it the content and conduct of warfare – how and where – that is changing, or is it the context – why and with whom – that is shifting? Embracing these extremes and assuming a revolution can be, to a certain extent, managed, a coherent and structured RMA should be a comprehensive combination of means and ends, content and context, process and purpose.

Preparing for an unknown future is not easy and never certain. However, in testimony before Congress, Krepinevich accurately highlighted the risk of an improper course: "We confront this era of transformational change, both geopolitical and military-technical, within an environment of declining resources for defense. Consequently, there is a risk that if the wrong transformation path is chosen (or if no attempt is made at transformation), we will find it difficult, if not impossible, to buy our way out of our mistake." (Krepinevich quoted in Adams, p. 101)

The vital point of Krepinevich's comments to Congress is that this "era of transformational change" is about much more than technology and funding lines. It is unlikely that the United States can simply buy its way to revolutionary change through financing the golden tools of the information age, or overcome complacency or strategic mistakes through mass production and rapid military expansion as it did in the Second World War. An obsession with technology can prematurely lead to path dependence and the inevitable implementation of the "law of the tool," whereby the solution is framed in relation to the tool at hand. The law of the tool can lead to an overemphasis on technology at the expense of strategy.

The Vietnam conflict is a case in point. "The superiority of American weapons confronted the inferiority of American strategy, which in turn was bound up with the weakness of American intelligence." (Friedman, p. 243) If the United States pursues a military-technical revolution without the other components of an RMA – operational innovation and organizational adaptation – can any different outcome be expected in the future? As in Vietnam, winning battles yet losing the war is a real possibility when technology is applied blindly to an altered strategic context. As Jeffery Rothrock, Director, Center for Global Strategic Planning, Stanford Research Institute International, points out, the best of technology will be ineffectual without the "unprecedented degree of conceptual, doctrinal, structural, procedural, and technological integration – i.e., far beyond "jointness" – that effective Information Warfare is certain to demand." (Rothrock, p. 222)

2. Pace of Change

Along with the direction of revolutionary change, the pace of change is a critical topic within the RMA. When and how fast should one modernize? What are the hidden costs and risks? How much will it cost in current capability to pursue "leap-ahead technology?" What may be the unintended consequences to revolutionary change? How might one hedge against these consequences? These questions reverberate through the corridors of the Pentagon, as the Department of Defense must trade current capabilities against modernization. This is not a new dilemma. The Royal Navy faced this decision as the age of sail was giving way to steam. With an enormous capital investment in a world-dominant sailing fleet, the Admiralty faced a difficult decision: to abandon Britain's investment and advantage in sail and modernize to maintain its world dominance, or to hold on to the current advantage and risk being left behind in the steam revolution. They successfully achieved both, pursuing modernization while maintaining their sailing fleet dominance. "The view of the Admiralty was of the need to monitor others' progress without revealing its own advance, thus stretching out the Royal Navy's advantages over its nearest competitors" (Arquilla and Ronfeldt, Information Power and Grand Strategy, p. 437. See also Brodie.) The Admiralty, successfully extended the age of sail, yet was well positioned to win the naval arms race[4], a production competition of steam-propelled, iron-clad battleships, with Germany prior to World War One.

Despite the example of Great Britain maintaining its global naval predominance during the successful transition from sail to steam, revolutions in military affairs tend, eventually, to level the playing field. Military powers often see their advantage evaporate

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[4] For the Anglo-German naval race, see Arthur Marder, Anatomy of British Sea Power and From Dreadnought to Scapa Flow and the revisionist interpretation in Jon Testsuro Sumida.

as conflict is redefined in ways that make their strengths less meaningful. "As the context is altered by revolutionary innovation, however, the old MOEs [measures of effectiveness] are clearly not appropriate in measuring the new model of operations. Perhaps they are no longer even relevant to altered objectives" (Cooper, p. 119)

"The competitive advantages of a military revolution are increasingly short-lived." (Krepinevich, p 37) This means that the current advantages of a dominant military are leveled by the new context of conflict. It also suggests that the advantages of being the first to revolutionize may be transitory as competitors rapidly respond to the new environment. The transition from battleships to carriers is a case in point. Japan was first to embrace revolutionary carrier operations, e.g., Pearl Harbor, but its advantage was transitory as the United States, stripped of most of its battleships, rapidly transitioned to a carrier dominated fleet (e.g., Midway and Marianas Turkey Shoot)[5].

More speculatively, in 1951, at the dawn of the nuclear revolution in military affairs, Arthur C. Clarke, famed science fiction author, penned a short article entitled "Superiority." It is a story of intergalactic conflict and the unabashed pursuit of technology that caused the defeat of a great power. The moral of "Superiority" is that the quest for the "silver bullet" is a deadly distraction, and that over-sophistication is undesirable. In Clarke's story, the most advanced of warriors were crippled by their own science and "were defeated by one thing only – by the inferior science of our enemies" (Clarke, p. 1)

It is not the *most advanced* technology but the *most appropriate* technology directed by pertinent strategy that will secure a dominant advantage in future conflict.

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[5] See Nathan Miller's War at Sea, George Baer's One Hundred Years of Sea Power and Ken Hagan's The Peoples Navy.

Focus and pace will determine the American course throughout the revolution in military affairs, creating not only new capabilities but new vulnerabilities as well. Direction and timing are indispensable, as Jeffrey Cooper observes in an echo of Carl Von Clausewitz: "Consistency of means and ends is important. A revolution in military effectiveness may succeed, and may even be dominant at the tactical and operational levels, but may not produce strategic decisiveness unless it is exactly and appropriately related to strategic purpose." (Cooper, p. 132.)

Chris Gray, Associate Professor of Cultural Studies of Science and Technology at the University of Great Fall, with an echo from Vietnam provides a warning about misguided technological fixations in his 1997 book Postmodern War – The New Politics of Conflict: "a technology may be powerful, but unless it is deployed at the right time in the right way it will not be useful as a weapon; it might even do more harm than good if it leads to the wrong strategy." (Gray, C., p. 57) [Remember the law of the tool.]

3. Information

Today, information controls the tempo and pace of life. Simply stated, "IW [information warfare]...[is] going to be central to the wars of the future." (Adams, p. 154) According to Thomas Stewart, author of Intellectual Capital,

> Information and knowledge are the . . . competitive weapons of our time. Knowledge is more valuable and more powerful than natural resources, big factories, or fat bankrolls. In industry after industry, success comes to the companies that have the best information or wield it effectively – not necessarily the companies with the most muscle." (Stewart, p. xix)

These words are not about future conflict but about the reality of business today. The business world is years into a revolution in business practices combining

technological advances, systems' development, operational innovation, and organizational adaptation. This revolution has completely reshaped commerce and there are many organizational lessons learned from the revolution in business practices that can be applied to the military. The military – more settled, dedicated to national defense instead of revenue generation, and offered fewer opportunities to receive a reality check based upon direct and daily competition – is slower to adapt to a changing world. Still, in varying degrees, the effects of the information age have reached every facet of society – civil, commercial, and military.

"Information and information technologies are increasingly important to national security in general and to warfare specifically." (Libicki, p. ix) Information pervades every aspect of modern warfare from advanced weapons to logistics, from command and control to personnel management, from tactical operations to strategic planning. With this reliance on timely and constant information, modern militaries have become vulnerable to information warfare. "Information warfare . . . seems to break down into three distinct pieces: perception management where information is the message, systems destruction where information is the medium, and information exploitation where information is an opponent's resource to be targeted." (Adams, p. 17)

Information warfare, in depth and breadth of application, is charting new territory. Like the revolution in military affairs, information warfare is struggling for direction. Two contesting viewpoints, the "strategic attack paradigm" and the "operational attack paradigm" (see Adams, p. 97), are pushing in alternative directions. These viewpoints can be compared to the Air Force and Marine Corps perspectives regarding airpower. The Air Force pursues a strategic attack paradigm, seeking to deny the enemy the means

to resist by destroying strategically critical targets – command and control nodes, industrial capabilities (factories, power plants, and the industrial workforce), and critical support facilities (airfields and ports) In accordance with classic airpower theory (see Douhet and Mitchel), this is an indirect assault on the enemy forces in the field, denying them the direction and support required to wage war. The Air Force views air power as a stand-alone capability with strategic impact while the Marine Corps views air power as an adjunct to primary, ground operations. Marine Corps airpower is a supporting arm, attacking operational targets in a combined forces' effort to directly defeat the enemy in the field. Naval aviation, a close cousin of Marine Corps air, is less doctrinally rigid. Seeking employment where it can be found, naval aviators strike a balance – operationally supporting ships and forces on the ground while simultaneously conducting strategic strikes against the industrial complex and command and control capability of the enemy. Similarly, proponents of strategic information warfare speculate on the ability of information attacks to deter or defeat adversaries without armed conflict while operational attack proponents concentrate on the ability of information warfare to support other military operations in a combined operational attack.

Although strategic information warfare, still largely untapped and unknown, holds promise, there are grounds to be hesitant about an overly strategic concentration at the expense of a more balanced information warfare approach. Does strategic warfare (air or information) really have a decisive impact on societies and their will to fight? While the successes of tactical and operational air support are undisputed – from the original blitzkrieg onward operational air support has been a decisive factor – the effects of strategic bombardment remain debatable. "As the bombing surveys found after the war

[World War II], the Germans, the British, and the Americans all failed to achieve the predicted success with their strategic bombing despite the great effort expended in men and material. Bombing stiffens civilian morale and does not totally disrupt production." (Adams, p. 97)

Precision weapons may increase the destruction on target, but it is questionable if these improved effects will alter the will of the enemy any more successfully than past strategic bombardments. The evidence from Baghdad and Kosovo is unconvincing. If this is true for strategic bombardment, is it also true for strategic information warfare? To paraphrase Winston Churchill assessment of the evacuation of Dunkirk[6], a well-conducted disruption does not win wars.

D. CONCLUSIONS

The effects of revolutions cannot be predicted. They produce discontinuous change, the rough outlines of which may be guessed at but the final outcome is never clear in the midst of the revolution. The greatest organizational assets under these circumstances are flexibility and adaptability. An organization that can rapidly respond to discontinuous change is a much stronger organization than one that accurately predicts, successfully adapts, and temporarily fits into an exploding, then fading niche. The goal of Naval Special Warfare in the early 21st century should be to hone the ability to experiment, to try many things and keep what works, to institutionalize flexibility and adaptive response.

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[6] Following the spectacular British evacuation of Dunkirk in 1940 that rescued Allied troops threatened by German capture Churchill reminded his countrymen in the midst of much British elation, "A well-conducted evacuation does not win wars."

III. INTO THE GLASS, DARKLY . . . FUTURE WARFARE

A. WHAT MAY COME

This chapter is a summary and synthesis of a variety of wide-ranging observations and projections concerning the strategic environment in the early 21st century. It is not intended to be a prediction; it is simply an imperfect view of what may come, as though "through a glass, darkly."[7] Although discontinuities will almost certainly affect these projected trends, it is doubtful that the pace of technical, social, geopolitical, and scientific change will slow or reverse course. An examination of the alternative perspectives within the current literature probing "the challenge of an unknown future" (Adams, p. 101) provides a platform to project future Naval Special Warfare organizational and operational necessities.

B. A STRATEGIC FOUNDATION

The strategic landscape of the early 21st century will be defined, in large part, by four factors: the general nature of the international arena; the strategic posture of the United States, including its international policy objectives and constraints; potential adversaries, their objectives and repertoires; and the interaction between the United States, its allies, and its future adversaries – the political, economic, and military discourse between allies and opponents.

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[7] "For now we see through a glass, darkly; but then face to face: now I know in part; but then shall I know even as also I am known." I Corinthians 13:12 Holy Bible, King James Version.

The Air Force 2025 project (Geis, SOF21 Seminar Presentation), combined three primary stimuli of future change – the world power grid; the American world view; and the degree of technological change, termed as delta TEK[8] – into projections of alternative futures. These concepts are useful in understanding how the world is changing.

1. World Power Grid

The world power grid is a conceptualization of the distribution of international power, including the polarity of world actors: uni-polar, bi-polar, or multi-polar. The world power grid during the Cold War was bi-polar, with the Untied States and the Soviet Union dividing the world between themselves. However, the world power grid is in transition to a multi-polar system, new in different and unique ways. The unchallenged supremacy of nations as the principal participants in international affairs is giving way to a combination of traditional states, nonstate enterprises (such as transnational criminal organizations, private volunteer organizations, non-governmental organizations and transnational corporations), and supranational bodies (such as the United Nations and the European Union)

> In addition to the dramatic increase in the number of nation-states, there has been a significant change in the character of the participants in the international arena. Nation-states remain the primary actors, but increasingly international organizations ... are making their presence felt on the international scene. In addition, transnational actors ... exert considerable influence in international relations. In essence, the world is organizing itself in a series of interconnected networks that, while in contact with each other, are not controlled by any traditional hierarchy (Davis, p. 87)

The increased influence and participation of non-state actors in international and national affairs is due, in part, to the information revolution: "Organization is as crucial

[8] The phrase Delta TEK is taken from the Greek letter Delta, which in scientific notation represents change; consequently, Delta TEK is the change in technology.

as technology in understanding the information revolution; this revolution is giving rise to network forms of organization; and the rise of networks will continue to accrue power to nonstate actors, more than to states, until states adapt by learning to remold their hierarchies into hybrids that incorporate network design elements. (Toffler and Toffler, 1997, p. v)

Part of this future adaptation may consist of what Alvin and Heidi Toffler envision as "deep coalitions." (See Toffler and Toffler, p. xix) – that is, combinations of nation-states and non-state actors in pursuit of common objectives. These coalitions are "deep" in the sense that they penetrate multiple layers of society: government/military, social, economic, religious, etc. However, they are also fragile. Coalitions in the future are likely to quickly materialize to meet an emerging threat or capitalize on a mutual opportunity and then, because of diverse interests and objectives, disintegrate when the immediate, common objective is achieved. The fragility of these coalitions is similar to past nation-state coalitions such as those facing Napoleon from 1773-1815 or the coalition assembled to face down Iraq in 1991. However, future deep coalitions may become even more brittle as non-state actors increase in influence. Interaction, coordination, and bargaining with non-governmental organizations are far different than state-to-state relations, a fact that has been highlighted in numerous humanitarian interventions. An example of the early development of deep coalitions is provided by the Zapatista insurgency in Chiapas, Mexico. The Zapatista National Liberation Army (EZLN) was supported by a multitude of nongovernmental organizations (NGOs) that succeeded, it appears, in pressuring the Mexican government to negotiate with the EZLN. (See Martinez and Ronfeldt, pp. 369-391)

2. American World View

The American world-view, at any given point in time, exists along a continuum of United States involvement in international affairs – from outwardly oriented and fully engaged, to inwardly focused and isolationist. Where the United States lies within this spectrum at any given time significantly affects all four factors defining the future security environment. The American world-view, ranging along this continuum, will dramatically affect the where, why, and with whom of future conflict. At the extreme isolationist end of the spectrum, the emergence of an inwardly focused American foreign policy might rearrange the international arena, sparking a power-struggle to fill the vacuum created by an isolationist United States. Furthermore, such a policy could alter the nature and interaction of future adversaries. At the other extreme of the international involvement spectrum, a fully engaged United States will most likely face asymmetric adversaries or would-be regional "middle-weights" attempting to establish or solidify regional dominance. Conversely, only a "heavy-weight" power threatening global dominance would draw out an isolationist America. Both World Wars are examples of isolationism yielding to the imperative of pursuing a "come-from-behind" victory against such a growing global power.

3. Technological Change

Delta TEK is the amount and rate of technological change and its degree of worldwide proliferation. Technological advances are striking in both range and rapidity. Micro-, bio-, and information technology are in the early stages of quantum advances. These technological developments, as well as many others, will not only affect military capabilities, but they also will pose significant social, political and economic

consequences. "The underlying issue, and the driving dynamic of contemporary war, is the proliferation of military technology." (Gray, p. 3) Importantly, the development of non-military technologies, their possible military applications, and their widespread proliferation may be critical elements of future conflict. Delta TEK, both military and civilian technology, will increasingly affect future conflict in dramatic ways.

C. ALTERNATIVE PERSPECTIVES OF FUTURE WARFARE

Many scholars, futurists, and military professionals have surveyed the distant horizon and beheld their personal specter lurking in the haze of the unknown. No one holds the panoramic vision; each describes components of the whole, a small piece of the future. However, each limited view adds breadth to the possibilities of what may come. Like the parable of the blind men groping to identify an elephant, each by touching upon a single part, their descriptions may be accurate, as far as they go, but they lack a holistic synthesis and comprehension. A comprehensive vision of the future is impossible, but touching upon the various parts of this unknown animal – future conflict – while understanding that we are touching only pieces, not the whole, will provide hints about the nature of the beast. The following section pieces together multiple perspectives in order to broadly sketch the future implications of a changing world.

1. Brilliant and Senile Weapons

Technology is a major topic of many contemporary commentators. "Desert Storm" in 1991 confirmed the dominance of intelligent weapons on the battlefield. The introduction of these strategically significant weapons was, for some, a defining moment in the Information Age RMA. "The strategically significant weapon is the one that brings force to bear in such a way that it decisively erodes the war-making capability of

the enemy." (Friedman and Friedman, p. 25) Others argue, correctly, that technological dominance alone – smart bombs against dumb adversaries – is hardly the clarion call of revolution. Even so, "Desert Storm" highlights significant technological advancements and urges an examination of where this advancement is heading.

Weapons technology is rapidly advancing and this advancement plays itself out in a continual offensive-defensive dialectic. Historical examples of this cyclic battle describe a trend that is likely to continue. For example, in World War I the development of the machine gun and advances in artillery, both in precision and rate of fire, produced the dominance of the defensive on land. Convoys combating U-boats on the open ocean established a maritime defensive dominance and temporarily overcame the offense mentality of both battleship theorists and anti-submarine hunter-killer patrol proponents. Dominance shifted to the offensive in World War II as armor, airpower, and communications fused with an overarching blitzkrieg strategy[9] and overthrew the established defensive strategies of leading armies. At sea the carriers solidly established offensive dominance in maritime strategy. This cyclic change has repeated itself throughout the history of warfare. Weapons systems appear to have a life cycle of their own, dictated by and contributing to the perennial offensive-defensive cycle. Weapons systems undergo a stage of early development, progress through a "quickening" and rise to dominance, and suffer eventual decline and senility as defenses and counter-defenses battle for ascendancy. This cycle, as well, continues to repeat itself.

[9] Interwar theorist and strategist – i.e., Liddell Hart (indirect warfare), Douhet (strategic bombardment) and JFC Fuller (maneuver warfare) - were instrumental in laying the foundation for allied adaptation.

George and Meredith Friedman, in their book The Future of War have identified eight key points concerning weapons development:

(1) New technology frequently appears less sophisticated than old technology.
(2) Each weapons system (or general culture of weapons) has a life cycle.
(3) The weapon system reaches its limit of usefulness when the defensive measures necessary for its survival destroy the weapon's cost effectiveness.
(4) The army least likely to recognize this point is the one that has been the most successful.
(5) At its high point, just before disaster, the last generation's technology appears to be invincible.
(6) The technologies that succeed in defeating the previous reigning weapons systems share one characteristic: a simplification of warfare, returning to the heart of warfare – the relentless offensive.
(7) Parasitization is always under way – each weapon becomes senile.
(8) A successful military is one that can constantly overthrow old weapons and doctrine and integrate new ideas and personnel without social upheaval. (Friedman, pp. 24-25)

With these eight points as a foundation, the Friedmans examine the current rulers of the battlefield – the tank, the manned aircraft (pilot in the cockpit), and the aircraft carrier – and predict their approaching, if still distant[10], decline. Precision guided, long-range munitions require targeted platforms to pursue advanced and costly defensive measures. Reactive armor on tanks, Aegis cruiser escorts for carriers, and advanced, computer-driven defensive systems and countermeasures on combat aircraft are cases in point. Because of fixed budgets, as the cost of fielding and protecting each platform escalates, the number of operational or deployed platforms within the order of battle declines. These platforms can be referred to as the large and the few. This, in turn, increases both the strategic value and vulnerability of individual platforms, as more and more precision-guided munitions can be targeted at fewer and fewer high-value systems.

[10] The horse cavalry, for example, was in a notable decline for decades yet remained a part of some armed forces past World War II. Decline and senility do not imply only obsolescence, but an ever-increasing burden upon the larger system.

Furthermore, this increased cost impacts other defense programs that suffer cuts in order to fund these increasingly senile weapons systems.

> Senility is a condition in which a weapon is not obsolete – it can still do the job. However, the threats it faces are so great that expensive countermeasures have to be taken. Those countermeasures mean, in the case of the aircraft, not only that not enough aircraft can be purchased but also not enough submarines, artillery pieces, or aviation fuel. An obsolete weapon is thrown away. A senile weapon continues to function by imposing an overwhelming burden of everything around it. (Friedman, p. 250)

Although the services are loath to accept the decline of the ship-of-the-line, the main battle tank and manned aircraft, other theorists, such as Libicki, Arquilla and Ronfeldt, and Adams, approaching the issue from other perspectives reach a similar conclusion, the demise of the major platform and a shift in strategic direction. While the Friedmans concentrated on the effects of technological advancements on weapon platform life cycles, Martin Libicki, Professor of Information Warfare and Strategy at the National Defense University, contemplates the affects of technology on the battlefield.

2. The Small and the Many

A system of brilliant weapons linked with multi-spectrum sensors, information processors, and decision-making nodes is the future vision of many current commentators. The dominance of smart munitions established during "Desert Storm" a new fact of warfare: If you can be seen, you can be killed. This reality has been developing for two decades. William Perry, former Secretary of Defense (1994-1997), while serving as undersecretary of defense for research and engineering predicted today's reality in 1978: The United States, he said, is close to attaining three objectives: "To be able to see all high-value targets on the battlefield at any time, to be able to make a direct hit on any target we can see, and to be able to destroy any target we can hit . . . [so as to]

make the battlefield untenable for most modern forces." (Perry quoted in Libicki, 1996, p. 2)[11]

Massed effects, i.e., precision concentrated firepower, will end the current era of large armored formations, concentrated logistic centers, and massed forces. In Desert Storm massed effects delivered by coalition forces, forces that Iraq's outclassed systems could neither see nor touch, denuded Iraqi forces and installations. While this did not win the war by itself, smart weapons did begin to remake the battlefield. When the proliferation of technology makes smart and smarter weapons available throughout the world, even the United States and its allies will become vulnerable to this new reality of warfare. "Future engagements are likely to see even relatively backward nations target major sensors platforms." (Libicki, 1994, p. 198)

Much like in the Old West phrase, the battlefield of today is filled with "the quick and the dead." The fastest (accurate) reactions determine the victor. "The unseen and the dead" will occupy future conflict, for even the quickest of reactions will not save those exposed to detection. Martin Libicki foresees a three-stage transition to future conflict: pop-up, mesh, and fire-ant warfare.

a. Pop-up Warfare

Near-term conflict, pop-up warfare, is characterized by weapons systems that are quiet and hidden until the moment of engagement. As Desert Storm revealed, "Fixed and slow-moving targets fare poorly on a pop-up battlefield." (Libicki, 1994, p. 193) Precision-guided munitions, as William Perry noted, make any identified target vulnerable.

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[11] For an excellent discussion of technology development during the Cold War Period see The Fifty Year War by Norman Friedman.

The obvious motivation of militaries with this precision capability is improving detection and classification.

b. Mesh Warfare

Advances in sensor and information technology will allow a transition from pop-up warfare to the "mesh," a grid of multi-sensors – seismic, acoustic, thermal, even smelling or sniffing chemical sensors – that make camouflage and stealth extremely difficult. The mesh will make large, complex, and costly platforms untenable and force a transition to smaller, more distributed and more expendable weapons systems. The "streetfighter"[12] concept, under development at the Naval War College is exploring this type of transition for naval platforms. "Today, platforms rule the battlefield. In time, however, the large, the complex, and the few will have to yield to the small and the many." (Libicki, 1994, p. 191)

c. Fire-ant Warfare

Micro-technology will aid in this transition to "fire-ant warfare." Millions of cheap and small objects, as small as insects, will be distributed throughout the battlefield to sense and attack enemy personnel, equipment and infrastructure. "Sensor grass, ant spies, surveillance dust" (Adams, p. 310) have all been speculated on as elements of the future battlefield. Science fiction is becoming reality because of dramatic advances in miniaturization, robotics, and information technology.

[12] For more information on Streetfighter see Cebrowski and Hughes (1999) at Proceedings on line http://www.usni.org/Proceedings/Articles99/PROcebrowski.htm.

d. Transition Hurdles

However, limits remain. A mesh depends on communication and can be disrupted by "radio-electronic warfare" (jamming, spoofing, electro-magnetic pulse, etc.) This requires a redundancy of systems, including not only sensors and shooters but also decision-making and processing nodes as well. Further, the more cluttered and confused the environment, the more difficult it is to detect, classify, and engage. "High density environments such as cities, jungles, and mountains [as well as congested and chaotic littorals] remain the preserve of the foot soldier[13] [and small but lethal maritime raiders]; the mesh will take over much more slowly in such realms." (Libicki, 1994, p. 212)

e. Blurring the Lines

Even so, military personnel and platforms with distinct and identifiable characteristics in any environment will find it difficult to survive the mesh and fire-ant warfare. This fact may lead to the "civilianization" of military assets, and the use of civilian or indigenous vehicles, watercraft, and airplanes for military purposes; and this tendency will blur the lines between military and civilian targets. The detection-equals-destruction equation combined with the future detection capability of the mesh underscores an increased need for camouflage and stealth that cannot be met with today's technology and tactics. Although mobile platforms, like Iraq's Scud missiles, may be able to hide today in pop-up warfare, expeditionary meshes will eventually overcome dispersion and simple, single-spectrum camouflage, i.e., an enemy relying on visual camouflage alone will be vulnerable to thermal, electronic, chemical, magnetic, and

[13] Although even modern foot soldiers will be equipped with sophisticated sensors, the point is that high-density environments complicate classification. Many "contacts." (both platforms and personnel) will be detected, but classification (friendly, hostile or neutral) will be increasingly difficult. Sparse environments (open oceans, deserts, lightly populated rural and wooded areas) often lend themselves to easier classification and targeting.

other-spectrum detection. However, if conventional forces and assets, aided by new stealth technology or innovative tactics, can eventually hide, civilian targets and infrastructure may become increasingly vulnerable to a frustrated adversary.

The future dominance of the conventional battlefield by advanced technology holds, for some, the promise of quick victory at reduced costs. For others, though, this dominance, combined with the blurring of the lines between military and civilian targets, points the way to another alternative: unconventional warfare. An inability to compete head-to-head does not ensure an adversary's capitulation. Instead, it forces the committed foe to seek alternative methods of conflict. "One set of arguments holds that the MTR [military-technical revolution] may increasingly enable armed forces to stand off and destroy enemy targets with high precision weapons fired from great distances, including outer space. But another set holds that the information revolution may drive conflict and warfare toward the low-intensity scale, giving rise to new forms of close-in combat." (Arquilla and Ronfeldt, p. 42)

3. The Age of the Guerrilla

Those bent on conflict, yet lacking a capability for direct confrontation, must adopt indirect means, the asymmetric attack. Lacking the military might to challenge America directly, potential foes will undoubtedly seek conflict on their terms, suited to their strengths, targeted at the United States' weaknesses, executed on their schedule, and relevant to their view of their world. "Our military superiority alone will not solve our conflicts with other countries... In the years ahead, the United States will not lack opponents, and some are certain to be quite capable." (Alexander, p. 35)

The use of the term "asymmetric conflict," like many trendy phrases, has become so indiscriminate that its finer distinctions have been lost. Guerrilla warfare has multiple asymmetries: (a) in capabilities and tactics, often the center of attention of most discussions concerning asymmetry; (b) in the interests at stake to both opponents and the corresponding commitment made to those interests; and (c) in strategic objectives.

a. Asymmetric Capabilities and Tactics

The asymmetry in capabilities is quite obvious. Historically, guerrillas are left wanting most military necessities, apart from small weapons and willpower, while their opponent commands armed forces far superior in conventional "power:" manning, firepower, and technology – communications, advanced weapons, mobility assets, etc. The asymmetry of tactics is equally straightforward. The conventional force seeks the grand battle, or denied that, massive attrition. The guerrillas, lacking the capabilities to overwhelm their opponent, seek to bleed the conventional forces through raids, ambushes, and subversion.

b. Asymmetric Interests

The asymmetry of interests is subtler. The insurgents pose no direct threat to the survival of their opponent because of the conventional weakness of the guerrillas. The American Revolution, Vietnam, and Afghanistan are examples. In the future, weapons of mass destruction may provide guerrillas and terrorists with the ability to strike the very homeland of their often-distant opponents. However, these strikes, although increasingly devastating, still would not likely threaten state survival. Conversely, the guerrilla's conventional opponent possesses the ability and often the intent to either subjugate or destroy the insurgents. As a result, there is an asymmetry of

interests at stake and in efforts applied to those interests. For the insurgent the conflict is an all-or-nothing, "total war" struggle for survival, while for the conventional power the stakes, and, as a result, the effort is limited. This limited effort is often further diluted by the multiple and diverse interests and commitments of the conventional power.

c. Asymmetric Objectives

The asymmetry of strategic objectives is crucial in guerrilla conflicts and is often unexamined by conventional powers. Henry Kissinger commented on this point concerning the Vietnam War:

> We fought a military war; our opponents fought a political one. We sought physical attrition; our opponents aimed for our psychological exhaustion. In the process, we lost sight of one of the cardinal maxims of guerrilla warfare: the guerrilla wins if he does not lose. The conventional army loses if it does not win. (Kissinger quoted in Mack, p. 185)

These asymmetries are often intertwined; the guerrillas lack a balance of conventional power (asymmetry of capabilities) so they seek to press their advantage in dedication and staying power (asymmetry of commitment) by psychologically wearing their opponent down (asymmetry of strategic approach) through prolonged conflict.

Those who see guerrilla conflict as the future of warfare highlight these asymmetries and point to an impressive list of bloodied conventional opponents forced to surrender the field of battle to the victorious guerrilla, including France (Vietnam), the United States (Vietnam), and the Soviet Union/Russia (Afghanistan and Chechnya) This is a forceful reminder that, "if our country employs air and space power thoughtlessly or unimaginatively, this power will be less effective, or even disastrously impotent... [moreover,] military power resides in the domain of the mind and the will; the provinces of choice, thinking, valuing or attitude and insight or imagination." (Szafranski, p. 395)

Guerrillas win because they out-last their opponents. They strike at conventional weaknesses – long lines of communication, fixed logistic and support bases, and isolated positions. They strike and sap not the war-making ability of their opponent but the will to continue. "Potential war-weariness is the Achilles' heel of the invader." (Alexander, p. 97)

These are important points at a time when international intervention in regional and internal conflicts appears to be on the rise, e.g., Bosnia and Kosovo. However, the same trends that seem to be revolutionizing conventional warfare and possibly driving conflict towards the low-intensity scale will also remake guerrilla warfare and low-intensity conflict. Distributed logistics, dispersed forces, increased mobility, precision strike, a mesh of sensors and shooters – effects of the coming information age RMA – will reshape guerrilla conflict. It seems as though traditional conventional weaknesses may be becoming less vulnerable to guerrilla attack, forcing the future guerrilla to seek other indirect targets aimed at inducing war-weariness.

In fact, post-RMA conflict appears to be similar to guerrilla tactics. For example, these comments by T.E. Lawrence, describing guerrilla operations, seem to be echoed by some RMA theorists describing future conflict: "Our operations . . . should be like naval war, in mobility, in ubiquity, independence of bases and communications, ignoring of ground features, of strategic areas, of fixed directions, of fixed points." (T.E. Lawrence quoted in Alexander, 1995, p. 125)

Can the same be said of the battle for space, the infosphere, and cyber-terrain? General Giap, the North Vietnamese strategist who led his nation to victories over France and the United States, stressed the tactical principles of "initiative, flexibility, surprise,

suddenness in attack and retreat. Giap's methods rest on accurate up to date intelligence." (Alexander, p. 125) This is remarkably like "info-warrior speak." If conventional forces become more like guerrillas with similar "qualities of speed, endurance and independence of arteries of supply" (Alexander, p. 123), another description by T.E. Lawrence, then how will this change unconventional conflict? Like future conventional conflict, unconventional warfare, i.e., guerilla warfare and special operations, is on the verge of a transformation. The degree and direction of this change will depend on the future vulnerabilities of conventional forces facing "differently-abled" and more desperate opponents. Weaknesses will always exist and the unconventional mind will continue to probe and attack these weaknesses. However, targets of opportunity may shift from, and will include much more than the traditional targets – exposed lines of communication, vulnerable logistic bases and isolated forces. Future conflict and guerrilla warfare will extend into cyberspace.

4. Cyberwar and Netwar

"Warfare is no longer primarily a function of who puts the most capital, labor and technology on the battlefield, but of who has the best information about the battlefield." (Arquilla and Ronfeldt, Chapter Two: Cyberwar is Coming, p. 23) In the past information was a commodity, scarce and valuable. It was guarded, hoarded, and hidden. The information revolution has change the nature of information. Although still valuable, it is no longer a commodity to be stocked but a tool to be used. Today, information is plentiful – small and cheap global positioning equipment provides precision locations anywhere in the world, commercially available satellite imagery provides information once considered top-secret, the world-wide web provides direct access to both the

greatest libraries and the greatest minds in the world. It is no longer a question of how much or what information can be obtained but how well that information can be processed into useful knowledge. It is less a question of what information one side has that the other lacks than of what effects each side derives from the information it possesses. The true value of information lies in its transformation into useful knowledge and understanding. Cyberwar and netwar are "about knowledge – about who knows what, when, where, and why, and about how secure a society or military is regarding its knowledge of itself and its adversaries." (Arquilla and Ronfeldt, Chapter Two: Cyberwar is Coming, p. 27)

Cyberwar occurs at the military level of conflict while netwar occurs at the societal level. Netwar corresponds to the more familiar areas of information operations (IO) and information warfare (IW). While cyberwar resembles IW or command and control warfare (C2W). Although similarly focused – cyberwar/C2W/IW takes place in the crisis and open hostilities stages of the spectrum while netwar/information operations apply through the entire spectrum of conflict – netwar and cyberwar are more comprehensive concepts than IO and IW.

> Cyberwar and netwar ... refer to comprehensive approaches to conflict based on the centrality of information – comprehensive in that they combine organizational, doctrinal, strategic, tactical, and technological innovations, for both offense and defense. (Arquilla and Ronfeldt, p. 6)

Information operations and information warfare apply new technology to established ways of doing things – old warfare with new tools. Netwar and cyberwar, conceptually, are a restructuring of the activity itself – a new type of warfare. Netwar spans the spectrum of conflict and, like guerrilla warfare, touches economic, political, social, and military forms of war. Neocortical or reflexive warfare may be a glimpse of

future netwar and cyberwar. Reflexive control is a Soviet concept aimed at "conveying to an opponent specially prepared information to incline him to voluntarily make a predetermined decision or to otherwise act in a way that is favorable to the accomplishment of one's own mission." (Adams, p. 236) Neocortical warfare is a similar concept originating within the United States.

> Neocortical warfare is warfare that strives to *control* or *shape* the behavior of enemy organisms, but without destroying the organisms. It does this by *influencing*, even to the point of regulating, the consciousness, perceptions and will of the adversary's leadership. (Szafranski, p. 404)

> [To do this] we must understand the adversary's culture, world view, and the representational systems the adversary recognizes, values and uses to communicate intent (Szafranski, p. 405)

During the Cold War the United States pursued competitive strategies that played against Soviet fears and perspectives. United States strategic bombers and naval threats pressured an invasion-wary Soviet Union into concentrating on defensive counter-measures. This capability was purchased at the expense of a greater offensive capability. An understanding of Soviet fears and appropriate competitive strategies reduced the threat of increased Soviet offensive capability. Neocortical and reflexive warfare are not new but more comprehensive concepts, requiring a deep cultural understanding and both foresight and skillful application. In a sense, it is the ultimate psychological warfare operation.

Earlier perspectives have examined technology's effect on weapon's life cycles and the battlefield, as well as adversarial responses to the United States' conventional arms dominance. The final perspective in this chapter examines the type, capability, and strategic objectives of adversaries.

5. Conflict Typology

There are three primary categories of competitors – peer, niche, and asymmetric – that the United States will likely face in the 21st century. The competitor often defines the conflict.

a. Peer Competitor

The peer competitor will challenge the United States on an even footing, much as the Soviet Union did during the Cold War. Most commentators see the rise of another superpower as unlikely within the next ten to fifteen years. Yet, history bears witness to the possibility of the rapid rise of an unexpected challenger. Examples are plentiful: "Revolutionary France arose from economic collapse to overthrow virtually all of its wealthy neighbors." (Arquilla and Ronfeldt, Chapter Eighteen: Information, Power and Grand Strategy, p. 421); Prussia rose, in roughly a decade, as the master of a unified Germany, capable of upsetting the balance of power in Europe; Germany rose from the ashes of World War I and the economic depression that followed, "After all, it was only ten years from the height of the Weimar Republic and the invasion of the Soviet Union in 1941." (Arquilla and Ronfeldt, p. 137); Japan quickly dominated the Western Pacific with less than 20 percent of the United States Gross National Product. More disconcerting than historical examples of rapidly rising challengers, however, are possible new realities of the information age. "Economic power built on this foundation [information] can be developed far more quickly. This source of strength is also far more agile and adaptable, and can respond with shorter time constraints to changes in the environment; it may well be capable of greater surprises." (Davis, p. 87)

Although this statement is yet to be proven, since much of the foundation of information-age strength is based on intellectual capital, this course to economic ascendancy may be much shorter than pre-information-age industrialization. Given the right circumstances – an information-age base of power, a single-minded effort, and the apathy and inattention of the rest of the world – a peer competitor could develop much sooner than expected.

b. Niche Competitor

Niche competitors will accept their limited ability to globally challenge the United States. However, in an attempt to establish themselves as regional hegemons, independent of United States interference, these "Avis" nations – "We try harder" – will target their energies on mastering niche areas – e.g., area denial, information warfare and/or regional dominance of forces – in order to deny the United States its superpower leverage. Area denial and defense in depth – extending the contested littoral farther and farther out to sea – have become the goal of some potential adversaries[14].

c. Asymmetric Competitor

These competitors will concentrate on American weaknesses – internal political divisions, lack of long-term concentration and commitment, concern over high casualties, limited attention span, and multiple interests around the world, over-reliance on technology and communications – through guerrilla warfare, terrorism, and their own "deep coalitions," consortiums of international crime organizations, rogue states, and sub-national groups.

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[14] These include China, India, Pakistan, Iran and North Korea. See "*Hunting Goliath in the Age of Asymmetric Warfare*," Jane's Navy International, Dec 1, 1999.

The asymmetric competitor, only a limited threat to national survival, could successfully prevent the United States from exercising its superpower capabilities in pursuit of broad American national interests and sour the America public and leadership on future interventions.

D. FUTURE CONFLICT

"A new epoch of conflict (and crime) [has begun,] defined ... by new dynamics and attributes of conflict." (Arquilla and Ronfeldt, p. 3) Precise predictions are impossible. Yet, current trends point to significant shifts in warfare. The battlefield will thin out in response to stand-off precision guided munitions and vast arrays of sensors; the concept of mass will yield to distribution and dispersion of forces and assets, mass will shift from forces to effects. Coalitions, including deep coalitions, will require increased inter-agency coordination and "looser" forms of organization; networks will significantly affect future conflict. Unconventional conflict – guerrilla warfare, terrorism, state-directed crime, and netwar – will increase, while the possibility of peer or niche competitors will remain a constant, if only latent, threat.

It has been said that contrast clarifies the mind. The following contrasts, comparing future warfare with the Chinese game GO and present warfare with the game of chess, point to a new direction for future conflict:

> It is more about proactive insertion and presence than about maneuver. It is more about deciding where to stand than whether to advance or retreat. It is more about developing web-like links among nearby stationary pieces than about moving specialized pieces in combined operations. It is more about fighting to create secure territories than about fighting to the death of one's pieces.
>
> Further, there is often a blurring of offense and defense – a single move may both attack and defend simultaneously. (Arquilla and Ronfeldt, p. 11)

E. SYNTHESIS OF PERSPECTIVES

In summary, current and future advances, despite an increased offensive strike capability, will lead to an increase in area denial capability, portend a shift from offensive to defensive dominance that will require a transition from the few, the complex, and the large to the small and the many, and, perhaps, foster an increase in guerilla warfare.

F. IMPLICATIONS FOR SPECIAL OPERATIONS

As conventional forces become smaller, special operations units in the field may shrink, even as the whole of special operations increases. As multi-agency operations increase, special operations forces will lean more heavily upon communication and interpersonal skills. As the effects of precision strike combine with vast sensor arrays to thin the battlefield, special operations, historically the first forces on the ground, may become the only forces on the ground for some missions and campaigns, conducting sensor emplacement, filling sensor array gaps where sensors or communications are blocked or obscured, and conducting indirect attack. As sensors take away the cloak of the night and deny cover and concealment, special operations forces may "hide in plain sight," utilizing indigenous mobility and cultural awareness and masking (i.e., fitting in). This will demand a greater diversity and depth of cultural awareness. As a result, regional specialization and cultural awareness will become increasingly important as globalization brings alternative cultural perspectives in immediate contact / conflict. As the direction and pace of the information age RMA becomes apparent, special operations forces should identify inherent American weaknesses and position themselves so as to "hedge the bet" and exploit adversaries vulnerabilities while defending America's. Former Secretary of Defense Les Aspen has pointed out, "History suggests that we most

often deter the conflicts that we plan for and actually fight the ones we do not anticipate." (Aspen quoted in Alexander, p. 52) Special Operations Forces in general, and Naval Special Warfare specifically, would provide considerable strategic leverage by anticipating the "fringe threats" that may explode upon an unprepared Department of Defense.

The key to being prepared for future conflict is a posture of balance, with flexibility combined with a broad perspective. "More important than the balance of power is the "power of balance" – the ability of a major state to keep its senses in the midst of this turbulence, and to match its economic and military capabilities with high-level knowledge resources." (Toffler and Toffler, pp. xix-xx)

Stewart's comments concerning the revolution in business practices applies as well to the coming RMA: "Revolutions – and this is a no-fooling revolution – have consequences that go far beyond anything anyone can predict. Surviving and thriving in such times require peripheral vision as well as focus, adaptability as well as power. The better you can understand the large forces – the tectonic plates – reshaping our world, the better you will be able to cope with the surprises they are certain to throw at us." (Stewart, p. xxvii)

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IV. INFORMATION AGE REALITIES

> All the notions we thought solid, all the values of civilized life, all that made for stability in international relations, all that made for regularity in the economy . . . in a word, all that tended happily to limit the uncertainty of the morrow, all that gave nations and individuals some confidence, . . . all this seems badly compromised. I have consulted all the augers I could find, of every species, and I have heard only vague words, contradictory prophecies, and curiously feeble assurances. Never has humanity combined so much power with so much disorder, so much anxiety with so many playthings, so much knowledge with so much uncertainty - Paul Valery (1932) quoted by Peter Schwartz in *The Art of the Long View*.

A. THE VANISHING CERTAINTY OF THE MORROW

Paul Valery's seventy-year old observation of a world in transition, a world in the grips of disorder and uncertainty, rings familiar in today's post-Cold war setting of e-commerce and globalization, a world awash in social transformation, technological innovation, and scientific discovery, and the resultant and much publicized revolutions in business and military affairs. Change is rapid and constant. Paradoxes abound – "so much power [combined] with so much disorder, so much knowledge with so much uncertainty." (Valery quoted in Schwartz, p. x)

This chapter examines the increasing interconnectedness, chaos, and contradictory choices facing organizations today and the problems they create. These are not new concepts. The military planner is familiar with disorder and confusion. They are common elements of military operations and central components of Clausewitz's "fog of war." Paradox is another recurring concept within the military. Edward Luttwak, a contemporary strategist, convincingly argues in his book Strategy that paradox is an essential element of strategy; Sun Tzu recommended to appear weak while being strong.

In fact, Luttwak points out that the traditional elements of strategy – mass, objective, speed, surprise, economy of effort, mobility, unity of command, simplicity – are often paradoxical choices. Chaos, interconnectedness, and paradox have been ever present. Historians can easily cite examples of episodic spikes from the past. This chapter does not assert that these are new phenomenon; it does maintain that technology and scientific perspective have provided the opportunity to deal with them in different and perhaps more effective ways.

Although chaos and paradox are not new, where they once were perceived as exceptions to the stable equilibrium they now appear pervasive. They appear to be permanent and prominent features of the information age environment. There is a change not only in the frequency or magnitude of these factors but more importantly, there is a *change in perspective* in how they are perceived and addressed. That is, they now must be seen as "the norm;" organizations must cope with chaos, interconnectedness, and paradox instead attempting to remove or ignore them. Organizations in the 21st century must adapt to an altered environment and learn to cope with prevalent and increasing interconnectedness, ambiguity, and chaos.

B. SHIFTING PARADIGMS – FROM NEWTON TO CHAOS

These organizational realities are being described in terms of a new scientific perspective. "Our view of reality rests on scientific paradigms. The world appears to us as an intricate, disordered place, and we search for frameworks that will make sense of it all. These frameworks derive overwhelmingly from the physical sciences." (Mann, p. 34) Today, a "New Physics" outlook is challenging the old Newtonian worldview; this altered worldview is being applied to organizations as well as atoms.

1. Newtonian Worldview

The industrial age worldview was based upon the foundation of the physical sciences established by Isaac Newton. "This paradigm is deterministic, linear, concerned with the predictable interaction of objects and forces, and oriented toward sequential change." (Mann, p. 34) In this reductionist perspective, the world is made up of separate, independent, and unalterable elements that interact in terms of fixed laws. These laws provide predictability and assign causal relationships. The focus of this worldview is on order, stability, and equilibrium. Each system is viewed as closed, separate, and distinct. This allows complex systems to be studied by separating the whole into simple parts and analyzing the individual pieces in isolation. (Roberts, 2000b, p. 1) "Finally, this mechanistic world view is reassuring, since it postulates a world of sequential change. It promises strategists that the course of events can be predicted if the underlying principles have been discovered and if the few variables involved are known." (Mann, p. 35)

> Newtonian science led us to look at organizational success in terms of maintaining a stable system. If nature or crisis upset this state, the leader's role was to reestablish equilibrium. Not to do so constituted failure. (Tetenbaum, p.21)

An alternative framework, a framework that views the natural states of complex organizations as unpredictable and disorderly, challenges the Newtonian perspective. In this alternative perspective, leadership is not expected to establish order or maintain equilibrium; instead, a high-quality leader is expected to cope with ambiguity and change, to encourage organizational adaptability.

2. Emerging Science of Wholeness

Post-Newtonian physics, rooted in complexity theory, has produced an important shift in perspective. "The shift is from looking at objects to looking at relationships and patterns in a cosmic process." (Roberts, 2000b, p. 4) It is a shift from the parts to the whole, from structure to process, from "building" to "network" as a metaphor for knowledge. (Nadeau and Kafatos, p. 213)

"Complexity theory looks at systems in ways that are organic, nonlinear and holistic." (Santosus, p. 2) Applied to organizations, a complexity theory perspective offers insight into facing an unfamiliar and altered world. Abandoning the Newtonian quest for prediction, complexity theorists seek to know the general character of a system's long-term behavior, not the specific output at a given moment in time. Prediction is impossible within chaotic systems because they are unstable; they respond in significant ways both to outside disturbances and internal feedback. "A complex system is a system consisting of a large number of agents that interact with each other in various ways. Such a system is 'adaptive' if these agents change their actions as a result of the events in the process of interaction." (Vriend, p. 1) Complex, adaptive systems behave in unfamiliar and non-obvious ways. Complex systems are non-linear. As a result, effects cannot be easily traced to their causes. In fact, there is apparently little proportion between cause and effect, i.e., small events can have massive effects while Herculean efforts to change the system may have limited effects. Complex systems are fractal, which means that the closer a complex system is examined the more complex the system appears; greater and greater detail always emerges. This attribute frustrates any Newtonian attempts to break a complex system into its elemental parts. Complex

systems are also sensitive to initial conditions; the slightest change in input can affect the outcome. As a result, a complex system is experienced as volatile and unpredictable.

The study of complexity offers important insights for organizations operating within a multifaceted and interconnected environment. Chief among these insights is that complex systems are self-organizing. "Order emerges. Structure evolves. Life is a recognizable pattern within infinite diversity." (Hock quoted in Tetenbaum, p. 25) The lesson from this insight is that organizational change is an emergent process. Outside, unexpected, and unknowable influences upset and alter even the best-laid plans. The familiar military maxim that "the plan never survives the first contact with the enemy" illustrates this point; once a plan is set in motion, emergence takes over. Emergence has been defined "as an overall system behavior that comes out of the interaction of many participants – behavior that cannot be predicted or "even envisioned" from a knowledge of what each component of a system does in isolation." (Lissack, p. 1) This view of change as an emergent process strongly supports the "learning school" perspective of strategic management, discussed in the next chapter.

Another valuable lesson is the importance of process, relationships, and the nature and quality of interactions between elements of a system. "Complexity theory underscores the importance of relationships. How people relate to one another affects what emerges in the organization – the culture, the creativity, the productivity." (Regine quoted in Santosus, p. 3) Where traditional management and leadership would be concerned with identification and control of the specific elements of a system, i.e., departments and divisions, complexity theory applied to organizations suggests that focusing on and improving the interaction among organizational members, units, and

external stakeholders should be leadership's primary objective. Although often dismissed as "touch-feely psycho-babble," this insight is about much more than making people feel good. It is about the efficient, or inefficient, interactions within and outside of an organization and the effects those interactions have upon organizational intent and purpose.

3. An Altered World

These two divergent perspectives – Newtonian and New Physics / Whole Science – have distinct interpretations of reality, separate concepts of meaning and understanding. "It would seem obvious that these two worlds cannot operate effectively under the same guiding principles." (Tetenbaum, p. 22) In an increasingly interconnected and complex world the Newtonian worldview appears less and less fitting, while the "wholeness" perspective seems to more accurately portray this altered reality. Traditional linear problem solving is ineffective in a world of non-linear, complex systems where cause and effect are not definitive or predictable, where the whole determines the behavior of the parts instead of the other way around, where disorder and order coexist. The conventional processes where prediction and control are paramount are out of place in a 'Whole Science' perspective. Using old problem solving in this context often exchanges one set of problems for another. Attempting to establish order upon a complex, adaptive system is futile.

Complex, adaptive systems consist of interconnected and interactive components. These elements are links in a chain of complex feedback loops, responding and providing input to each other and the whole.

The increased interaction and connectivity between organizations in the information age highlights the significance and insight of the complexity theory perspective

C. INTERCONNECTEDNESS

Globalization, technological advancements, instantaneous communication, and increased inter-organizational interaction have changed the world. "The world is being rendered smaller and smaller, and countries are linked in such an interlocking system that actions in another country can have both immediate and delayed effects on American states and communities." (Luke, p. 16) Jeff Luke characterizes this increased interconnectivity as a dramatic evolutionary shift: "What the United States has witnessed in the last decades is analogous to what evolutionary biologists call anagenesis: a rather sudden, qualitative shift in evolutionary development. In this case, the anagenesis was the rapid formation of global and local interdependencies, creating invisible – yet tangible – intersocietal and interorganizational webs that now encircle the planet." (Luke, p. 14)

The impact of interconnectedness on policy making and strategic planning are far-reaching:

- Action occurs in expanding and crowded policy environments in which everything depends on everything else and power is dispersed and shared by a multiplicity of public and private actors.
- There is a significantly reduced capacity for any single [member] to effectively act unilaterally.
- An enlarging ring of often unforeseen, unintended, or indirect consequences increases vulnerability and openness to outside influences.
- Policy formation and implementation moves forward very slowly (unless, on rare occasions, it is somehow stimulated by a major crisis), leading to an increase in slow-acting remedies to important policy issues.

- The consequences of policy choices and public action are often far-ranging, delayed, and have indirect or hidden costs beyond the "normal" externalities. Because desirable and undesirable consequences are difficult to separate, important and often critical second- and third-order effects of enacted policy choices can go unnoticed. In other words, managers and policymakers have difficulties achieving the outcomes they want and have trouble avoiding the outcomes they do not intend. (Luke, pp. 18-19)

Naval Special Warfare is not immune to this increasing interconnectedness. Any attempt at organizational transformation will require an increased sensitivity to both outside organizations and unintended consequences. Unilateral action will become increasingly limited as organizational interests overlap and outside stakeholders exert a growing influence. This interconnectivity and complexity is highlighted by an analysis of Naval Special Warfare stakeholders. The numerous interconnections influenced by any NSW change effort underscore the need for a collaborative approach to organizational transformation.

1. Stakeholders and Stakes

A stakeholder is "any group or individual who can affect or is affected by the achievement of an organization's purpose." (Roberts and King, pp. 64-5) Naval Special Warfare stakeholders are numerous and consist of both external and internal groups. Internal stakeholders will be addressed following an analysis of the external stakeholders.

a. External Stakeholders

The external stakeholders can be classified by their interaction with or stake in Naval Special Warfare; these broad categories include organizations that control, employ, or influence Naval Special Warfare.

See page 58 for an external stakeholder map.

(1) Controlling stakeholders. These stakeholders have decision-making authority over Naval Special Warfare. Significant changes in Special Warfare organization and policy must be approved and endorsed by these organizations. Primary controlling stakeholders include the U.S. Special Operations Command (SOCOM) and the U.S. Navy. Secondary stakeholders in this category include the Assistant Secretary of Defense Special Operations / Low Intensity Conflict (ASD SOLIC) and the Congress of the United States.

SOCOM exercises operational control of all special operations forces within the United States and is tasked, among other things, with manning, equipping, training, and deploying these forces world-wide. In addition to operational control, SOCOM also controls the budget and dictates special operations policy. The U.S. Navy exercises administrative control over Naval Special Warfare, including personnel promotions, organizational structure, and, like SOCOM, policy. Navy policies directly affecting NSW include, among other things, training procedures, deployment restrictions (i.e., limits on the number of days from home station), and reporting requirements.

The Navy and SOCOM can compete as stakeholders as they pursue divergent polices, objectives, and opposing organizational perspectives. ASD SOLIC and Congress, although more indirectly than the Navy and SOCOM, have a controlling influence on Naval Special Warfare. ASD SOLIC, like SOCOM and the Navy, is also responsible for policy affecting special operations and NSW. Congressional decisions affect both policy and budgeting.

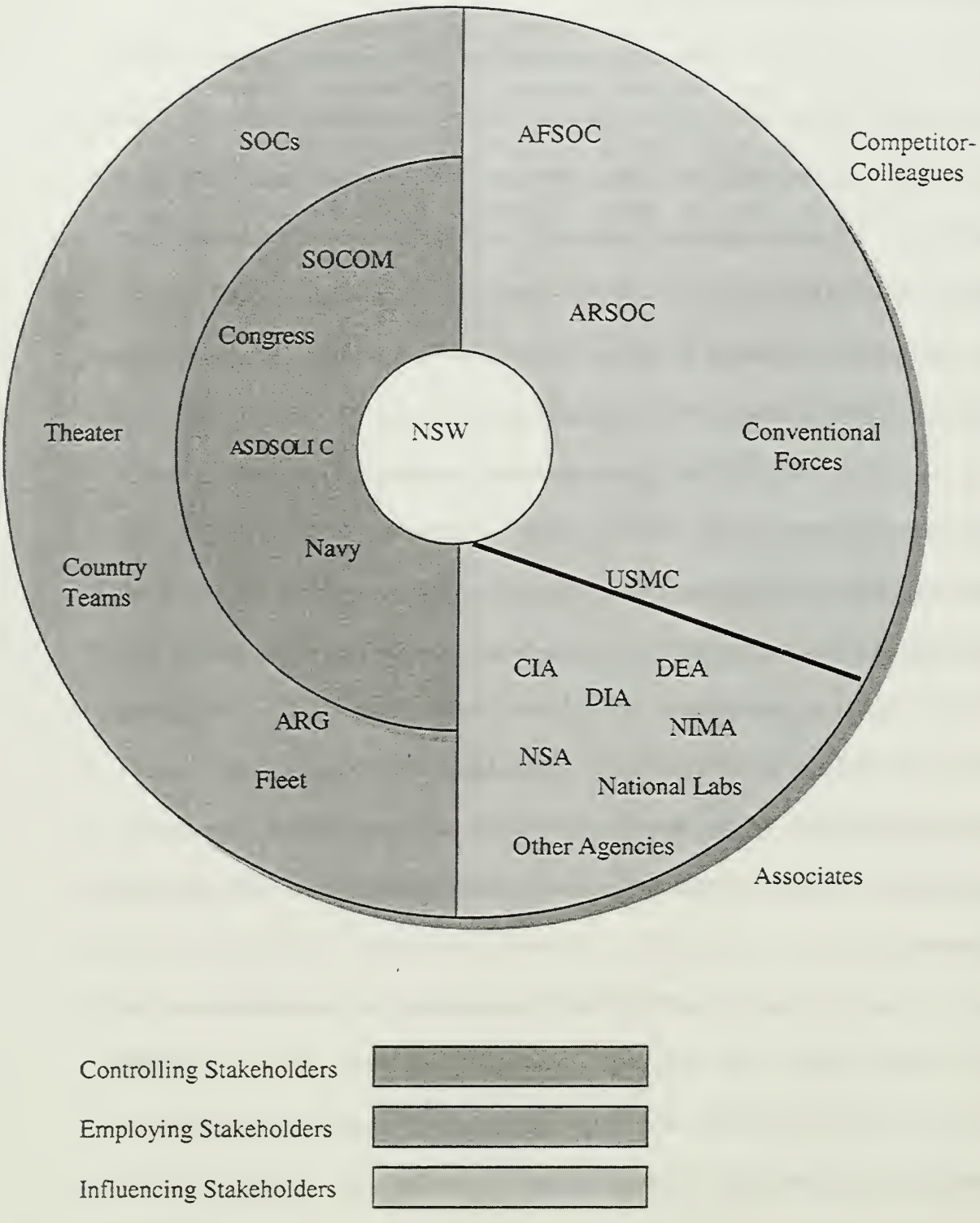

Figure 4-1 NSW External Stakeholders

(2) Employing stakeholders. These stakeholders utilize and employ Naval Special Warfare forces (refer to page 58). They are the end-users of all NSW "products." They have an advisory role to the controlling stakeholders, identifying theater requirements and desired operational capabilities. The ultimate employers are the four Theater Commanders, i.e., U.S. European, Southern, Central and Pacific Commands (EUCOM, SOUTHCOM, CENTCOM and PACOM) Theater Commanders plan, direct, and coordinate the use of all forces within their theater. In practice, both joint and fleet component commanders direct Naval Special Warfare forces for Theater Commanders. Deployed NSW forces are nearly evenly divided between assignments to joint and fleet commanders. Theater Special Operations Commands, such as Special Operations Command Central (SOCCENT), are the joint SOF components to the Theaters. They direct theater utilization of all joint special operations forces. Numbered Navy Fleets (i.e., 2nd, 3rd, 5th, 6th, 7th FLT) oversee theater utilization of NSW forces not assigned to joint commanders. These forces are primarily assigned to amphibious ready groups as advanced forces but also include land-based forces assigned to Naval Special Warfare Units. The NSW forces assigned to joint and fleet commanders are nearly identical, i.e., similar in mission capability, training, manning, and equipment, and can rotate, as in the Pacific theater, between designation as joint or fleet assets. Although the forces they employ are similar, there can be significant friction between these two stakeholders (SOCs and FLTs) as both joint and fleet commanders pursue differing priorities and are driven by dissimilar organizational perspectives, ideologies, and positions; this is similar to the friction that can occur between SOCOM and the Navy staff discussed earlier. Additionally, these stakeholders might compete for theater employment, priority assets,

and standing within their theater. Theater Commanders, when required, mediate this competition between component commanders.

Outside of the theater Commander in Chief's direct chain of command, specific Embassy or Consulate Country Teams, under the direction of the State Department through local ambassadors, also affect theater employment. Country Teams focus on political concerns of military presence and employment and can be advocates for or opponents to Naval Special Warfare presence within their countries of responsibility. In the past there has been friction between some Theater Commanders and Country Teams concerning the command and control of deployed forces.

(3) Influencing stakeholders. These stakeholders neither control nor employ NSW forces but can influence Naval Special Warfare's actions and their effects through competitive responses, support, and assistance. Influencing stakeholders can be divided into two categories – competitor/partner and associate (refer to page 58)

(a) Competitor/Partner stakeholders. Army and Air Force Special Operations Commands (ARSOC and AFSOC), SOCOM component commands, are peer organizations to Naval Special Warfare. They can compete for budget allocation and personnel end-strength within SOCOM and for missions, employment, and utilization within theater Special Operations Commands. On the other hand, they also can partner with NSW as colleagues to economize resources and maximize special operations effects in theater. The U.S. Marine Corps influences NSW through utilization and employment competition on Amphibious Ready Groups (ARGs), as well as through competition between Special Operations Commands and ARGs. The

Marine Corps can also influence Navy policy decisions about and endorsements concerning NSW proposals through Marine Corps and Navy staff interaction and coordination. For example, the Navy staff, because of Marine Corps concerns and considerations, may oppose a Naval Special Warfare proposal. Alternatively, as with ARSOC and AFSOC, the Marine Corps has also coordinated with NSW to define roles and missions and improve mutual support in a collegial relationship.

(b) Associate stakeholders. These stakeholders are not competitors or partners but have an influence on NSW through their indirect or intermittent association, interaction, or support. This may include outside agencies such as the National Security Agency, Central Intelligence Agency, Drug Enforcement Agency, National Imagery and Mapping Agency, National Laboratories, and commercial vendors. Additionally, host nation governments and their special operations forces, through policy decisions, exercises, and exchanges, can influence NSW.

b. Internal Stakeholders

Naval Special Warfare is obviously a primary stakeholder in its own organizational adaptation but it is not a single, individual stakeholder. NSW is comprised of multiple internal stakeholders. (See page 63 for an internal stakeholder map.) These stakeholders are created from the organizational structure, as well as from the personnel that make the organization.

(1) Divisional stakeholders. These stakeholders include: Naval Special Warfare Groups and the SEAL Teams they direct; Special Boat Squadrons and the Patrol Coastal ships and Special Boat Units they direct; the Naval Special Warfare Development Group, the Naval Special Warfare Center – NSW's training

command; Seal Delivery Vehicle Teams and Advanced Seal Delivery System commands; and the Very Shallow Water Mine Counter Measures Detachment. These stakeholders hold differing perspectives and objectives based on their position and function within Naval Special Warfare. Priorities, key issues, problems, and processes may differ among these stakeholders.

(2) Age set stakeholders. Another category of internal stakeholders is differentiated by personnel characteristics. Age sets - an anthropology term that categorizes people within age groups and levels of responsibility - are useful in describing these internal stakeholders. NSW age sets include senior, mid-grade, and junior officers, members of the civilian workforce, as well senior and junior enlisted. Although these stakeholders are rarely considered, separately, each group usually possesses differing personal objectives, perspectives, and insights that affect organizational effectiveness and successful implementation. Although generational divides have always existed, little attention has been paid to the effects of these separate groups upon organizational processes or to the changing interaction between groups brought on by the information era.

These age sets possess differing levels of technological sophistication, dissimilar degrees and types of motivation, and alternative insights and perspectives. This can present organizational stumbling blocks if ignored or organizational capital if harnessed.

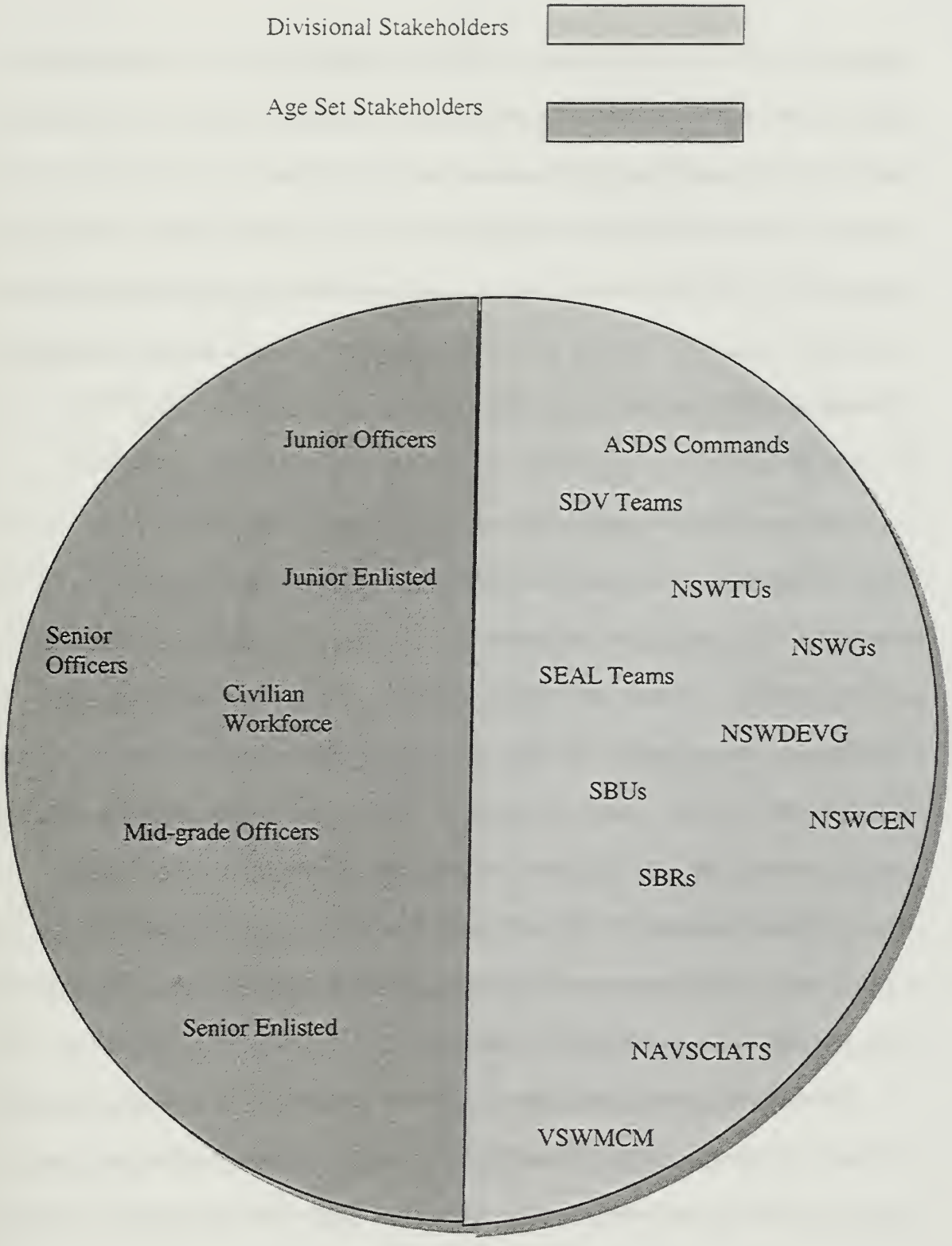

Figure 4-2 NSW Internal Stakeholders

Interconnectivity is a critical element of modern organizational life. It can best be addressed from a complexity theory perspective; a perspective that is a stark contrast from the current industrial-age Newtonian paradigm. Paradox is another pervasive element of the information age; interestingly, it too, can be addressed from two divergent perspectives. As discussed earlier, paradox is a common theme within military strategy. Contradictory choices are nothing new, but increasing the either/or perspective is being challenged by a less familiar both/and proposition.

D. PARADOX

Organizations are routinely faced with conflicting choices. These paradoxical choices are abundant as organizations slowly adapt to the information age. The list of paradoxes is never ending: plan and experiment; long-term and short-term; centralize and decentralize; product and process; stability and change; readiness and modernization; empowerment and accountability. "The conflicting choices or conditions that are the essence of paradox make most people uncomfortable, enveloping them in the ambiguity that attends the perceived need to choose between seemingly bipolar opposites. A common way to handle this unpleasant state is to 'fix' on one polarity and to see the world as 'either/or' rather than to reconcile the two polarities with 'both/and' thinking." (Tetenbaum, p. 23)

This is precisely the lesson Collins and Porras discovered in their extensive study of visionary companies. In their bestseller, *Built to Last,* they identify these two coping strategies as the "Tyranny of the Or" and the "Genius of the And," respectively. When faced with a paradox, such as long-term and short-term interests or accountability and empowerment, visionary companies aggressively pursued and excelled at both. They

refused to accept an either/or proposition. They also refused to settle for the middle ground with a mediocre combination of both options; the earlier account of the Royal Navy's transition from sail to steam is a an example. Collins and Porras found that one of the discriminators between visionary companies and their competitors was the commitment and demonstrated ability of visionary companies to excel at both extremes of a paradox.

E. RESPONDING TO INTERCONNECTEDNESS, CHAOS AND PARADOX

"Our strategic frameworks are based on the mechanistic assumptions of classical physics. If we start with different assumptions, by incorporating different scientific paradigms, we may see more productive strategic principles emerge." (Mann, p. 38) Interconnectedness, paradox, and complexity/chaos impose challenges that are beyond the reach of industrial age paradigms. A "whole science" perspective and the insights of complexity theory offer more productive principles and strategies to address the challenges of the information age.

Recent geopolitical shifts, technological advances, societal changes and organizational pressures – in short, substantial and rapid change and uncertainty – have signaled to many the need for organizational transformation. The move is away from industrial-age structures and processes to a yet-to-be-defined information-age organization. Naval Special Warfare, like the rest of the Department of Defense, has been searching for answers to a number of thorny questions: Why transform? How best does a large organization adapt? Change into what organizational form and for what purpose? What organizational elements change and which ones stay the same? In a relatively stable and predictable environment, these questions, if they are even

asked, can be straightforward; they require some environmental scanning, executive decision, and organizational modifications. However, in a turbulent environment, answers to these questions, and even the questions themselves, often lack clarity and frequently can change.

In a complex and interconnected setting numerous stakeholders can limit freedom of action and obstruct or redirect strategic action. As Luke has observed, "It is increasingly clear that interconnected environments can also create increasing stability [read in "resistant to change"] as expanding webs of stakeholders spread power widely, resulting in more people having the ability to prevent action from occurring." (Luke, p. 15) Additionally, a chaotic environment can amplify unintended consequences. As a result, strategic planning and organizational transformation in an era of rapid change is not a simple problem.

1. A New Class of Problem

Within Naval Special Warfare and among its stakeholders there is broad disagreement on what, specifically, "the problem" is that organizational adaptation is supposed to address. Operational employment, retention, morale, leadership development and utilization, support function streamlining and consolidation, the use and maximization of new technologies, reactions to recent social and political changes, as well as responses to perceived threats and opportunities – all of these compete for attention. Competing solutions, each addressing subsets of these varied issues, divide both external and internal stakeholders, who are guided by independent and often

divergent motivations. Under these conditions, Naval Special Warfare approaches what has been termed "wicked problem territory:"[15]

- The problem is an evolving set of interlocking issues and constraints. Indeed, there is no definitive statement of the problem. You don't understand the problem until you develop a solution.

- There are many stakeholders – people who care about and have something at stake in how the problem is resolved. This makes the problem-solving process fundamentally social. Getting the right answers is not as important as having stakeholders accept whatever solution emerges.

- The constraints on the solution, such as limited resources and political ramifications, change over time. The constraints change, ultimately, because we live in a rapidly changing world. Operationally, they change because many are generated by the stakeholders, who come and go, change their minds, fail to communicate, or otherwise change the rules by which the problem must be solved.

- Since there is no definitive problem, there is no definitive solution. The problem-solving process ends when you run out of time, energy, or some other resource, not when the perfect solution emerges. (Conklin and Weil, p. 4)

The ill-defined and social nature of wicked problems is likely to make traditional strategic planners and top leadership uneasy. Wicked problems, an entirely different class of problem, resist conventional thinking, traditional tools, and established problem-solving methods. For example, quantitative analysis requires precise definition and clarity that is often unavailable with wicked problems; hierarchical decision-making takes a dim view of shared responsibility and social problem-solving processes. Although executives and planners are uncomfortable and unfamiliar with, and often unprepared for wicked problems, they are quite familiar with the pain they cause within organizations. "It is the pain of expecting things to be one way and repeatedly banging into a different

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[15] See Roberts, N. (2000a), *Coping With Wicked Problems*, Naval Post Graduate School, Monterey, CA.

reality. It is the pain of trying to do good work in an environment full of motion and effort but few results." (Conklin and Weil, p. 1)

When top-down decision making and solid, linear strategic planning fail to fix the problem, it may not be a result of poor decisions or bad planning. These traditional tools may simply be inappropriate for a new and different type of problem, a type of problem resistant to Newtonian, reductionist thinking. Naval Special Warfare organizational adaptation to the information age is one such problem and it requires a new problem-solving approach.

2. Alternative Approaches to Wicked Problems

Alternative approaches to coping with wicked problems are characterized by their posture towards stakeholders. Stakeholders can be excluded entirely from the planning and development process. They can act as rival opposition clusters to one another, or stakeholders can join forces and work together in some collaborative way. These postures correspond with the three strategies for coping with wicked problems: authoritative, competitive, and collaborative.

a. Authoritative Strategies

This approach to problems solving seeks to confine the number of stakeholders involved in the problem solving process to those who have explicit authority or recognized expertise. Other stakeholders who are affected by the problem or its solution, but lacking direct authority or acknowledged expertise, i.e., employing and influencing stakeholders, are excluded from the process. Reducing stakeholder involvement is done in an attempt to "tame" problems, reduce their complexity, and avoid potential conflict. The primary goal of this approach is to define the problem and

obtain a solution in a timely and efficient manner and confine the problem solving process to those with expertise and authority.

Traditional strategic planning approaches rely on authority and expertise. They are directed by the organizational hierarchy and are authoritative in nature. The current Naval Special Warfare approach to strategic planning and adaptation serves as an example. NSW commanders, in consultation with both SOCOM and Navy Staffs, define the problem and craft solutions for adaptation. Other stakeholders, Theater Commanders, SOCs, Fleets, as well as NSW partner organizations and other outside organizations, are often ignored or have limited input during the planning and development phase. Even internal NSW stakeholders, the implementers of the eventual plan, are not closely involved in the strategic planning process.

(1) Advantages. Authoritative strategies have their merits. They can reduce complexity by reducing the number of people involved and thus speed decision-making. Additionally, such strategies take advantage of the specialization and expertise of professionals. Who better to solve the organization's problems than those who lead and understand the organization? Why involve lower-level personnel or outsiders, others who may not be as aware or informed about the organization's purpose and activities? When time is critical, action is vital, and authority is respected and unchallenged, authoritative approaches appear to be very appropriate.

(2) Disadvantages. Authoritative approaches can be less than optimal in wicked problem territory. The difficulty of implementation increases as the complexity of the problem and the number and influence of stakeholders grow. Non-controlling stakeholders, excluded from planning and development phases, may question

the appropriateness or utility of a strategic plan developed by experts and those at the top of the organization in consultation with controlling stakeholders. Although the Special Operations Command and Naval Special Warfare Command have the authority and responsibility to adapt their organizations to a changing environment, redirect their efforts as needed, and remake their product, the end users have the power to accept or reject those changes in their employment decisions. Both the "customer" and the front-line worker, who are excluded in an authoritative approach to strategic planning, can derail the plan during implementation.

Traditional strategic planning, a product of the design and planning "schools" of strategic planning, is based upon the assumption of a stable or at least predictable environment. Top-down strategic plans take considerable time to cascade down through the organization. As a result, implementation can be slow and ineffectual. Implementation problems can occur when non-participants in the planning process fail to understand the reasons for the authoritative decisions. Ultimately, implementation may be resisted or fail outright. Although authoritative problem solving may be fast in the planning phase, the implementation process risks slowing the overall effort. Thus, an authoritative approach to strategic planning with a time-consuming and fractious implementation process can result in applying outdated solutions applied to tomorrow's novel problems.

The possibility of a narrow focus and the fact that learning and insight are often limited to a few participants in the planning process are additional potential drawbacks of an authoritative approach. "Experts tend to search for solutions within their narrow bandwidth of experience, potentially missing other important

issues." (Roberts, 2000a, p. 9) Strategic planning, especially in a new and unfamiliar environment, is a leaning process. Limiting problem solving to experts and leaders squanders an opportunity for broad organizational learning. Although findings and conclusions can always be publicized, insight and understanding are often contingent upon "experiencing the journey," not simply hearing about it.

b. Competitive Strategies

Competitive strategies, like authoritative approaches, also partition stakeholders. While authoritative strategies separated those with and without explicit authority to define the problem and solution, competitive approaches seek to divide stakeholders in a pursuit for power and influence. Stakeholders are pitted against rival stakeholders in a win-lose competition.

(1) Advantages. Competitive approaches have their advantages. Intense competition can fuel the search for new and innovative ideas. Competition can also challenge the institutionalization of power and question the status quo. In a rapidly changing environment, where the status quo may be inappropriate, these challenges provide a valuable service. When authority is questioned or non-existent and stakeholders refuse to collaborate, competition may be the only viable strategy. If Naval Special Warfare stakeholders (especially Fleets and SOCs) cannot collaborate, NSW may be stuck in the middle of a competitive struggle.

(2) Disadvantages. There are drawbacks to a competitive approach, especially for Naval Special Warfare. Competition can distract focus and squander resources. Resources dedicated to competition might be better spent on problem resolution. For example, time and resources spent in bureaucratic infighting,

justifying and countering competing strategies cannot be applied towards implementation or experimentation. Competition can also create an impasse when competing stakeholders may wield enough power to block their opponent's initiatives but lack the power to push their own plan through to implementation. With conventional forces, other special operations forces, and new technology contending for traditional Naval Special Warfare mission areas (refer to p. 4 of this thesis), a competitive strategy might understandably emerge. However, a competitive strategy would be especially disadvantageous for Naval Special Warfare because of its small size and limited resources. NSW could be overwhelmed in a competition with much larger organizations. For example, both ARSOF and the Marine Corps, potential competitors over strategic direction and theater employment, have considerable political influence and significantly larger staff representation. A competition over NSW strategic direction would be played out in the staffs of SOCOM and the Navy, an unfavorable arena for a win-lose competition involving Naval Special Warfare. As one senior SEAL officer observed, "Naval Special Warfare should never forget how very small it is."

c. Collaborative Strategies

Collaborative approaches, in contrast to authoritative and competitive strategies, seek to involve and engage stakeholders in problem definition, agenda setting, and implementation. Unlike competitive approaches, collaborative strategies pursue a win-win perspective towards strategic planning and problem solving.

(1) Advantages. Collaboration can reduce redundancies, economize resources and create organizational efficiencies. Shared meanings can be developed through the blending of stakeholder perspectives and the exchange of insights.

As a result, implementation of a collaborative plan can be faster than other planning approaches because the implementers, involved in the process from the start, ideally, can possess a shared meaning of the problems and the solutions. Inefficiencies, misunderstandings, or delays created through cascading information flows, as is often the case in authoritative strategies, can be reduced. Collaboration can encourage and foster increased communication between stakeholders and create or strengthen network structures. (Refer to Gray, B., as well as Bunker and Alban.)

Perhaps most importantly, social capital can be formed among the stakeholders through strengthened network structures, shared meanings, and increased trust and interaction. "Social capital is the aggregate of actual or potential resources that can be mobilized through social relationships and membership in social networks." (Nahapiert and Ghoshal quoted in Gray, B., p. 5) In other words, social capital formation is the development of an increased ability to achieve results by creating a network of stakeholders with strong communication, increased trust, and strong reciprocity. (See Putnam)

The process of collaboration can transform organizations, as Barbara Gray, a leader in the field of multiparty conflict and collaborative problem solving, has noted: "Collaborative efforts, can, for example, introduce new governance mechanisms for the domain, reframe values and precipitate power shifts and, effectively, restructure entire organizations." (Gray, B., p. 3) The introduction of new processes and a restructuring of the organization is a critical element of collaboration. Through collaborative planning and problem solving, the domain – Naval Special Warfare and its stakeholders – could be transformed.

The process of planning to change would begin to change the organization even before a plan was initiated.

The creation of a network with the capacity for shared intellectual capital and increased social capital is the greatest potential outcome of collaborative strategies. The full realization of this potential would create a "holographic organization," where the sum total is resident within all of the parts. Within a holographic image the entire picture is contained in each and every piece. Each individual part contains the essence, the embodiment of the whole.

> It sounds crazy, but it's true. The holographic plate on which an image is encoded, the equivalent of a negative in photography, can be broken into hundreds of different pieces. Any one of those pieces can then be used to re-create an approximation of the whole, because the whole image is contained in all the parts! (Morgan, pp. 9-10)

Within a holographic organization, each individual member would possess the shared values and meanings of the larger whole and have the ability to tap into the full resources, including the intellectual and social capital of the organization. This is not a description of an army of automatons in some robotic-like collective. Rather, it is a description of a collaborative network where the whole is built into all of the parts, where each individual member can "produce and reproduce the competencies, skills, vision, values, and ethics of the organization on an ongoing basis." (Morgan, p. 12)

If Naval Special Warfare were to become a holographic organization, each individual staff officer on all the dispersed staffs around the world would be transformed from a unit of one, representing the whole yet outside and distanced from it, into the embodiment of the organization, a conduit to the entire

capability of the network. Small, geographically isolated operational units could draw upon the resources of the entire organization. While internal Naval Special Warfare stakeholders would form the core of this holographic organization, the boundaries of the network would blur as outside stakeholders connected and interacted with the network.[16]

(2) Disadvantages. Despite the possibilities of social capital formation, increased communication and trust among stakeholders, and a potential for real and significant transformation, collaboration is not a cure-all. Increased stakeholder involvement adds complexity; increased communication, scheduling, and establishing norms of conduct and standard operating procedures among varied stakeholders requires effort and time. Furthermore, experience with collaboration and the skills required to successfully collaborate – team-based problem solving and decision-making, fostering a participatory environment, etc. – are in short supply within traditional bureaucracies and hierarchies. These skills must be learned and developed if collaboration is to be successful. Even with the proper skills collaboration will not always be successful; despite serious efforts, entrenched stakeholders may refuse to accept some visions, values, and shared meanings. Leadership may be unable or unwilling to trust the counsel of external stakeholders and front-line personnel. Failed collaboration can undermine trust in top leadership and cause disenchantment. "Empowerment" and talk of participation and collaboration appear manipulative and shallow if executive leadership refuses to alter their personal decision-making process.

Rigid authoritarian rule is not compatible with collaboration. It has been found that networks that attempted to "combine both centralized authority and

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[16] For a further description of holographic organizations refer to Morgan, G. (1997), Imaginization – New Mindsets for Seeing, Organizing, and Managing, Sage Publications, Thousand Oaks, CA.

dense, cohesive decentralized links, were less effective than those with a centralized authority structure only." (Gray, B., p. 17) It appears that alternating between authoritarian and collaborative approaches can be disruptive and confusing. Combining centralization with decentralization – rigid top-down decision-making with full-dimension collaboration, i.e., bottom-up and outside-in group effort – can cause confusion regarding authority and accountability. Some authority, although certainly not all authority, must be delegated in order for collaboration to succeed. Regardless of the degree of delegation, the extent and limits of this delegation must be clearly drawn, understood, and maintained.

Although authority is compatible with collaboration, the *ultima ratio*, the final word of authority, can no longer be "because I said so!" The rationale of decision-makers should be shared with stakeholders and collaborators, especially in situations where collaborative input is sought but subsequent recommendations cannot be implemented, as will be the case in some circumstances. Empowerment and participation, with all their potential benefits, come at a cost. That cost is the loss of regal dictate surrendered to meet the requirement for appropriate discourse among all stakeholders. A new collaborative process that ends in "business as usual" decision-making can demoralize personnel and damage leadership credibility.

d. Selection Criteria

Each strategy is appropriate in different contexts. All have their place depending on the situation. In this instance, the current operational environment is complex, interconnected, and filled with uncertainty and rapid change. Key selection

criteria in this context should be flexibility, speed of implementation, as well as organizational and environmental fit.

The potential transforming effect of collaborative approaches stands in stark contrast to authoritative and competitive strategies. Although these strategies may plan and attempt to direct an organizational transformation, unlike collaboration, they do not create a transformation as a function of their processes. At best, other strategies can effectively and appropriately reorganize the structure of an organization by reshuffling the boxes within an organizational diagram. However, in the information age significant organizational strength and capability is created in the white space between the organizational boxes, in the processes and interactions among internal *and* external stakeholders, in the social capital created by the network. A collaborative strategy builds and strengthens the all-important relationships in the white space of organizations, in between the boundaries of divisions, age sets, and outside stakeholders.

The collaborative approach to strategic planning and organizational adaptation is very flexible. Leadership can tailor the level of delegation of authority to fit any situation and collaborative processes can be adapted to adjust to specific organizational cultures. (See Bunker and Alban.) In addition, the organization using a collaborative approach has the flexibility to adapt to changing circumstances because of increased, network-wide communication and well-developed shared meanings and values. Collaboration fits the information age environment. For example, reach-back headquarters support, exemplified by the NSW Mission Support Center in Coronado, California, is a prime example of collaborative, information age networks that are the bow-wave of future military organizational adaptation.

Organizational fit is not a problem with any of the three approaches; all three strategies have been utilized within Naval Special Warfare. Competitive and disciplined NSW members are familiar with and excel at making the most of both competitive and authoritative approaches. Naval Special Warfare internal stakeholders are familiar with small-unit collaboration, and NSW mission planning is based upon a collaborative approach. Table 5-1 compares and contrasts the authoritative, competitive, and collaborative strategies across relevant selection criteria.

|.....Wicked Problem Coping Strategies.....|

Selection Criteria	Authoritative	Competitive	Collaborative
Risk (Too close to call)	MED / HIGH Plan not accepted by end-users or implementers (Slow-roll)	HIGH All or Nothing gamble - Lose and Lose BIG	Dependent up HQ Increased expectations not fulfilled
Short-term Cost Long-term Cost	**Low** Medium (Repeated failed/delayed implementation)	High (Political capital) High (Opportunity cost)	Significant ($, time, effort) **Low**
Planning Time	Medium (1-2 yrs)	Long	**Short** (Months)
Implementation Time	Long	Long	**Shorter**
Process Change	None	None	**High**
Organizational Fit	Good	Good	Good
Environmental Fit	Poor	Poor	**Good**
Summary	Business as usual in an era of change	Organizational Suicide	**Change the organization** as you plan to change.

Table 4-1 Selection Criteria Comparison
of Wicked Problem Coping Strategies

The authoritative approach is less effective in the current environment. Competitive strategies, similarly ineffective, pit NSW in a losing battle against larger and entrenched organizations. In an altered environment organizations cannot expect to get enhanced, more effective results by attempting to improve long-standing, but inappropriate approaches. New circumstances demand different approaches and a collaborative approach, proven successful in both the private and public sectors, is the best strategy for uncertain times.

F. SUMMARY

The implications from these information age realities – complexity, paradox, interconnectedness, wicked problems, etc. – are significant and far reaching. They call for a new perspective, a different approach to the way organizations plan and accomplish their objectives. Predictability and control are illusions:

> CEOs and CIOs are used to thinking that they have to have all the answers, that they are in control of everything. Well, control is not something you can have over a complex system, at least beyond some very general parameters. So yes, executives do have to change. They have to give up the illusion of control and concentrate instead of setting a larger vision for their organization so that the creativity of their people can emerge. (Regine quoted in Santosus, pp. 5-6)

The following coping mechanism will be critical factors in dealing with the complexity and interconnectedness of the 21st century:

- Collaboration. Unilateral action will be increasingly difficult and unsuccessful. Collaboration will build the process and relationships necessary to address future opportunities and problems.

- Flexibility. This implies abandoning rigid constraints, adopting looser action guidelines, and developing a greater shared understanding and organizational

awareness. "Chaos [complexity] theory also points to the importance of developing guidelines and decision rules to cope with complexity; and of searching for non-obvious and indirect mean to achieve goals." (Levy quoted in Lissack, p. 4)

- A cumulative approach that combines many small initiatives. In the next chapter this is described as "logical incrementalism." Every organizational action should be seen as a link in an iterative process, initiatives must be evaluated and adjusted to changing circumstances. "We can know, but we cannot predict...Essentially, an organization must be flexible enough to adapt, creative enough to innovate, and responsive enough to learn." (Crossan, White, Lane, and Klus quoted in Lissack, p. 4)

The following chapters identify processes and perspectives that will increase flexibility, creativity, and responsiveness in both strategic planning and organizational adaptation.

IV. STRATEGIC PLANNING APPROACHES

This chapter contrasts alternative perspectives of strategic formation and combines several strategic schools of thought for application within Naval Special Warfare. It argues for a transition from the Department of Defense's narrow strategic management perspective – a formal, bureaucratic, and hierarchical process designed for a stable and predicable environment. It recommends an approach that combines multiple strategic schools into a hybrid strategic planning process that is more appropriate during dynamic and unpredictable times.

A. PLANNING IN AN AGE OF UNCERTAINTY

Intensifying chaos combined with regularity and order, dubbed a "chaordic" condition by VISA founder Dee Hock, presents organizations with significant and unfamiliar challenges. The world today is vastly different from the world of only a few years ago and perhaps equally different from the near future. Facing rapid change and the challenges of a chaordic environment, how do organizations prepare for an uncertain future?

Individual and organizational perspectives, life-experiences, and cognitive frames affect the implications, anticipated importance, and focus of an organization's response to this question as well as the varied solutions offered by organizational consultants, strategic planners, and stakeholders. Context along with personal and organizational preferences create varied perspectives and present many wide-ranging responses to the question of organizational adaptation.

This point was strikingly clear during a series of interviews conducted with the majority of Naval Special Warfare's senior leadership. Twenty-two captains and three rear admirals, 97 percent of the Naval Special Warfare community's top leadership, were interviewed in early 1998 for a RAND study concerning the future of Naval Special Warfare[17]. Their responses and perspectives, drawn from years of experience, were insightful and clearly articulated; they were also widely divergent. Issues that might have been important to some officers were peripheral to others. Many recognized key environmental challenges and proposed innovative responses. However, the envisioned future of Naval Special Warfare, for each officer, was founded on dissimilar priorities, insights, and experiences.

There is no one right answer to this problem of organizational adaptation, no golden path, but, increasingly, as some have recognized, the solutions to past problems will fail to hold the keys to future success. Tried and true may no longer hold true.

Recent literature (Ashkenas, (1995), Chowdhury, (2000), Christensen (1997), Hock (1999), Mintzberg (1998), and Nadler (1995), among others) suggests that periods of uncertainty require different processes than practices that are appropriate during times of stability. Strategic development, as well as leadership tools and styles, must adapt in order to be successful in the future.

A well-suited and successful synthesis of alternative and, at times, contrasting perspectives and processes is increasingly important in contemporary strategy-making. Collins and Porras, in the best-seller *Built to Last*, refer to the mastery of contrasting combinations as "the Genius of the And." This refusal to accept the "Tyranny of the Or" is characteristic of top performers in the private sector, as Mintzberg points out: "High

[17] Unpublished RAND study conducted by Capt. Bob Harward.

performance firms appear capable of blending competing frames of reference in strategy making. They are simultaneously planful and incremental, directive and participative, controlling and empowering, visionary and detailed." (Mintzberg, p. 20)

The current environment requires organizational agility, innovation, and flexibility. Clausewitz's analogy concerning the difficulty of transitioning from the posture of a wrestler to that of a fencer is appropriate for all industrial-age organizations caught in a changing information-age world. As Clausewitz noted, strategic approaches and processes are not easily changed. Despite this difficulty, the cost of change is cheaper than the penalty of an inappropriate line of attack. Continuing Clausewitz's analogy, DOD's current strategic planning process might be likened to an old, overweight wrestler fighting well past his prime – slow and methodical, reliant upon brute force and (bureaucratic) weight, ill suited for altered circumstances and new rules. A process tailored to a dynamic environment, by contrast, would adopt the attributes of a world-class fencer - agile, flexible, and simultaneously proactive and responsive.

B. THE OLD SCHOOLS

The strategic planning process of the Department of Defense, the Planning, Programming, and Budgeting System (PPBS), was designed in the 1970s. It is a product of the "design" and "planning" schools of strategic management, the two dominant schools during this time. U.S. Special Operations Command and Naval Special Warfare have similar planning processes that feed into the DOD PPBS. Even non-budgetary military strategic planning, furthermore, is guided by the assumptions of the design and planning perspectives.

Although these schools provided a fitting strategic foundation during the relatively stable years of the Cold War, they are ill suited for the current turbulent environment.

1. Design School

The design school views strategic planning as a process of conception; strategy is formed through analysis. Senior leadership scrutinizes the organization's strengths and weakness and scans the environment for opportunities and threats; this process is known by the acronym SWOT. The SWOT analysis - leadership's diagnosis - then is developed into a fully formulated prescription for action. Grand strategy flows fully conceived from the top to be implemented by the rank and file.

Design school strategic planning can be effective in a relatively stable environment; however, in less stable periods organizational thinking and action must be closely associated, tandem functions. The linear and disjointed nature of conception and implementation within the design school can cause serious problems in unstable or complex environments. This separation between formation and implementation can cause delays that often render the plan outdated, as it is overcome by events, or can weaken the plan because planners are unaware of implementation realities. One study in this problem area reported that only 10 percent of corporate strategies actually get implemented (Kiechel, p. 8); one reason for implementation failure is the separation of design and execution. This separation between formulation and implementation is incompatible with a turbulent environment, as Mintzberg points out:

> Behind the very distinction between formulation and implementation lies a set of very ambitious assumptions: that environments can always be understood, currently and for a period well into the future, either by the senior management or in ways that can be transmitted to the that management; and that the environment itself is sufficiently stable, or at least predictable, to ensure that the formulated strategies today will remain viable after implementation. Under some conditions at least – more and more, if you believe those who claim the world is becoming more turbulent – one or the other of these assumptions proves false. (Mintzberg, p. 41)

2. Planning School

The planning school builds upon the foundations of the design school and depends upon clear quantification of goals and objectives. External assessments (environmental scanning, predictions or scenario building) and internal audits (resource calculation) are conducted in an effort to understand requirements and opportunities as well as constraints and organizational capabilities. Strategies are put into operation through programmatic objectives and budgets with strong emphasis on control. Decision-making is driven by a tightly scheduled and elaborate mechanical process that concentrates on cost/benefit analysis and return on investment (ROI) calculation.

The planning school is dependent upon notions that become fallacies in a turbulent world: (1) assuming predetermination and relying upon prediction or forecasting, (2) insisting upon analytical detachment, and (3) over-formalization in an instable environment. These fallacies are counter-productive and harmful.

a. The Fallacy of Predetermination

Consistently and successfully forecasting future requirements and opportunities in a rapidly changing world is not possible. "While certain repetitive patterns (e.g., seasonal) may be predictable, the forecasting of discontinuities, is . . . practically impossible. Very little or nothing can be done, other than to be prepared,

except in a general way, to . . . react quickly once a discontinuity has occurred. Long-range forecasting (two years or longer) is notoriously inaccurate." (Mintzberg, pp. 67-68)

Although scenario development is a useful tool to prepare an organization to respond to future possibilities and sensitize it to potential discontinuous change[18], PPBS and other planning school methods are overly dependent upon accurately predicting future requirements. This is readily apparent in the Department of Defense's response to the end of the Cold War. Although strategic concepts such as *Forward from the Sea*, *Hunter-Warrior*, the *Expeditionary Air Force*, and *Army XXI* are being developed to address a changing strategic environment, future requirement prediction has remained unclear and unchanged. In response to this uncertainty the strategic programming and budgeting process has largely ignored these conceptual strategic shifts and the environmental factors that drive these adjustments. The unresponsive planning system continues to develop and promote legacy platforms and pursues sustaining technological innovation rather than championing discontinuous innovations that supports new strategies currently under development. In addition to an over-reliance on forecasting, the planning school often over-emphasizes hard data. This emphasis on quantification feeds into the fallacy of detachment.

b. The Fallacy of Detachment

Planning school strategic development, based upon a premise of analytical detachment, evaluates strategies "by the numbers." Emotion, intuition, and other qualitative insights are often ignored. Bottom line justification frequently fails to take account of important non-economic and non-quantitative factors. This is especially

[18] See *The Art of the Long View* by Peter Schwartz for a discussion of scenario building and the advantages of examining alternative futures.

true in the case of discontinuous innovation. Clayton Christensen in The Innovator's Dilemma highlights the difficulty of successful firms to pursue discontinuous innovation; that difficulty is rooted, among other things, in the rigid cost/benefit evaluations of large corporations. The benefits of discontinuous innovations are difficult to quantify prior to their successful implementation; as a result of this analytical difficulty, discontinuous innovations are ignored by industry leaders and are surrendered to entrepreneurs, unfettered by the conventional wisdom. As Christensen pointed out, "when the discrepancy [the problem to be solved by a proposed investment] was defined in terms of cost and quality, the projects languished." (Christensen, p. 28)

Hard data is important because it informs the intellect. More importantly, soft data builds wisdom; this includes intuition, the appreciation of incalculable cultural and social factors, and the odds and ends of many details, qualitative as well as quantifiable, that combines into a synthesis greater than the sum on an accountant's spreadsheet.

Financial analysis, focusing exclusively on hard data, impedes rather than supports strategic development. Mintzberg, in a critique of the planning school, highlights process deficiencies that are one cause of the current mismatch between DOD capital budgeting and strategic development discussed earlier, i.e., legacy platform acquisition at the expense of future adaptation.

> Hard-to-qualify costs and benefits were excluded from the financial analysis. Capital budgeting, therefore, appears to be a formal means not to plan strategy but to structure the consideration of projects and to inform senior management about them. For example, most capital budgeting seems to take place in the context of existing strategies – which means in the absence of any fresh strategy thinking. In other words, it reinforces the strategies already being pursued. Any joint effects across units have to be ignored for the convenience of formal analysis.

> But since synergy is the very essence of creative strategy – the realization of new, advantageous combinations – then capital budgeting may discourage it. To conclude, taken seriously, we find that not only is capital budgeting not strategy formation, it most decidedly impedes strategy formation. (Mintzberg, pp. 75-76)

While new, complex, and turbulent environments require innovation, sterile "number crunching" and endless analysis are often obstacles to innovation. Sustaining strategies may spring from formalized analysis; innovative strategies, however, emerge from novel insights. Edward De Bono, a leading authority on creative thinking, highlights the limitations of analysis:

> Most executives, many scientists, and almost all business school graduates believe that if you analyze data, this will give you new ideas. Unfortunately, this belief is totally wrong. The mind can only see what it is prepared to see. Analyzing data will enable the analyst to select from his or her repertoire of old ideas to find which one may fit. But analyzing data will not produce new ideas. (De Bono, 1992, p. 24)

c. The Fallacy of Formalization

The planning school seeks to institutionalize the strategic creation process with rigid procedures. Formal systems are well suited to process hard information, merge it, total it, and manipulate it. However, formalization cannot internalize, comprehend, or synthesize the data it has captured. These tasks cannot be driven by procedures and schedules; in fact, rigid processes can often impede them. Formalization can be appropriate for routine tasks. Strategic development in uncertain times, however, is far from routine. A tight sequence can destroy a process that is by nature loose and open.

> There is something strange about formalization, something that can cause the very essence of an activity to be lost simply in its specification. As human beings, we often believe that we have captured a process simply because we have broken it into component parts, and specified procedures for each. Yet all too often, that just breeds a certain mindlessness. For some kinds of processes involving learning, innovation, and the like, that only seems to drive them over some kind of edge – the formalization edge. (Mintzberg, p. 75) [See Figure 5-1.]

Some SEALs have been concerned about crossing this formalization edge with automated mission planning systems. This possibility exists because an over-reliance on technology, automated processes, and "canned" procedures can create the mindlessness that Mintzberg mentioned. The key to avoiding such a fate is to be able to fully utilize the available tools while avoiding being captured by the tools and surrendering to the process. Within the planning school the process, not the planner, is in control.

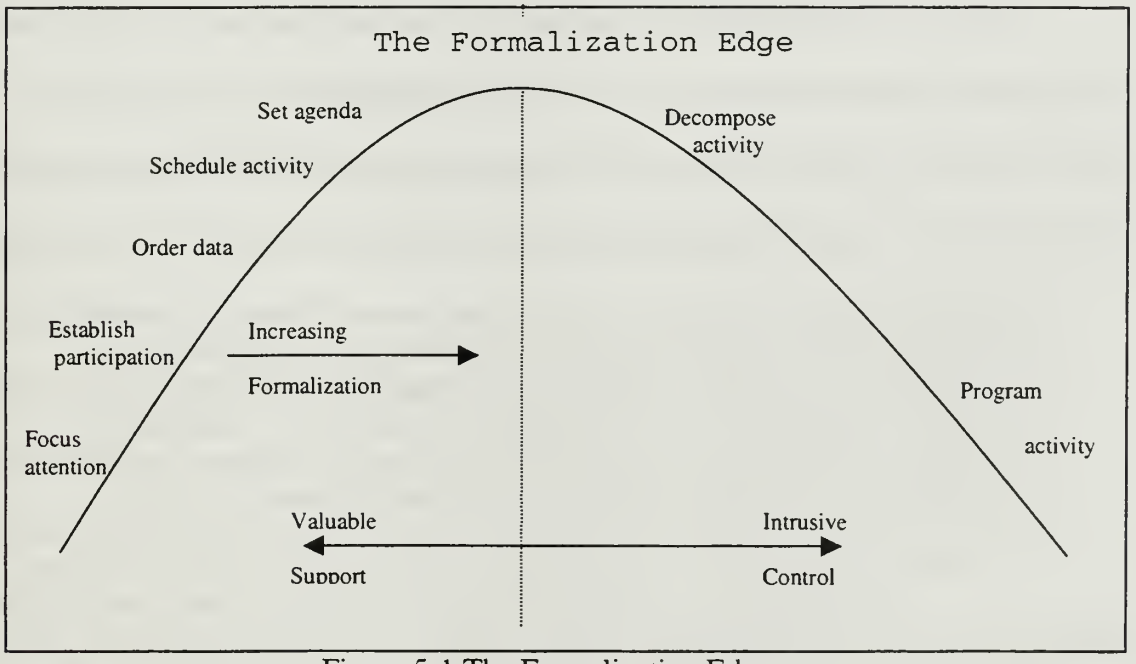

Figure 5-1 The Formalization Edge

(From Mintzberg, p. 74)

Insight and innovation cannot be scheduled. Responsive strategies do not appear immaculately conceived at the end of an arbitrary planning time-line. Crossing the formalization edge through over-programming and excessively rigid procedures can inhibit comprehension, synthesis, and creativity, essential ingredients of adaptive strategy.

C. ALTERNATIVES TO OLD SCHOOL STRATEGIC PLANNING

During the late 1980's and through the 1990's alternatives to the traditional models of strategic planning began to receive increasing attention. The entrepreneurial, cognitive, learning, and cultural schools offer valuable insights into how strategic development actually takes place and provide a toolbox for adaptive strategic planning in a chaordic world.

1. Entrepreneurial School

This school describes strategic planning as a visionary process; it is a matter of seeing beyond conventional wisdom, of seeing the same things that others see but in different ways, of making unexpected and valuable combinations from the ordinary. Mintzberg contrasts typical and entrepreneurial approaches in this way:

> The typical administrator asks: What resources do I control? What structure determines our organization's relationship to the market? How can I minimize the impact of others on my ability to perform? What opportunity is appropriate? The entrepreneur...tends to ask: Where is the opportunity? How do I capitalize on it? What resources do I need? How do I gain control over them? What structure is best? (Mintzberg, p. 132)

The contrast is between a reactive approach that responds within established precedent and a more proactive approach that creates new patterns of behavior. The active search for opportunities dominates entrepreneurial strategy making. Mintzberg approvingly cites Peter Drucker, who wrote, "Entrepreneurship requires that the few

available good people be deployed on opportunities rather than frittered away on solving problems ." (Mintzberg, p. 133) Obviously, problems cannot be ignored, but the frame of reference is critical; this frame has been labeled "appreciative." Appreciative approaches seek to deliberately notice, anticipate, and heighten positive potential. This is contrasted by a problem-solving approach that is an inherently conservative, limiting approach that can separate stakeholders and promote both a deficiency orientation and a fragmented view of the world. (See Barrett (1995) for further information of appreciative inquiry.)

Much has been written about corporate visions and visionary leadership; however, both can suffer from the same disconnection between conception and implementation that plagues the design school. Mission statements developed by senior leadership or isolated committees, cascading down to the rest of the organization from on high, often fail to inform and inspire those tasked with implementation.

"Visionaries do not just 'see' things from a new perspective; they get others to see them too." (Mintzberg, p. 138) An articulated vision that fails to motivate the organization is useless. Conversely, a shared vision can capture, inspire, and remake an organization. At a stage beyond vision implementation, a visionary organization repetitively recreates the compelling vision. Building a visionary organization, as Collins and Porras maintain in *Built to Last*, is far better than relying on a leader with a vision (Collins and Porras, p. 23) The objective should be to create, foster, and channel the entrepreneurial spirit within every member of the organization.

The entrepreneurial model of strategic planning has direct relevance to Naval Special Warfare; NSW is founded upon an entrepreneurial perspective. Creating

novel approaches, making unexpected and valuable combinations out of the ordinary, contrasting the conventional wisdom with an unorthodox approach is the essences of unconventional warfare. Naval Special Warfare Group One recently published a white paper entitled "The Plan" that outlines the Group's vision and sketches a new operational concept that stresses "unorthodox solutions to complex military problems." (NSWG-1, p. 2) The entrepreneurial spirit – seeing things differently, creating new insights from the ordinary and the ignored – is at the heart of this vision and the operational concept that supports it.

2. Cognitive School

The cognitive school, like the entrepreneurial school, is concerned with seeing and vision but concentrates on the vantage point of perception, on multiple insights and shifting perspectives. This approach views strategic planning as a mental process. It stresses alternative frames of reference that provide insight. "Strategies thus emerge as perspectives – in the form of concepts, maps, schemas and frames – that shape how people deal with inputs from the environment." (Mintzberg, p. 169) Mental maps and cognitive frames are necessary to make sense of the world, but the use of only a few analytical concepts can restrict strategic possibilities. Alternative views of the world, a repertoire of frames, are critical to insight. "Insight hinges on a willingness to use multiple lens or vantage points." [19] (Mintzberg, p. 168)

[19] See Russo and Schoemaker, Decision Traps – The Ten Barriers to Brilliant Decision-Making and How to Overcome Them ; Part One - Decision Framing.

Interviews with NSW senior leadership, as discussed earlier, highlighted the existence of multiple realities, dependent upon individual perspectives and organizational vantage points. Traditional strategic planning founded on the design and planning schools would discourage or restrict these divergent views for the convenience of formal analysis. The cognitive school, in contrast, encourages these multiple viewpoints and would seek to merge them into a panoramic perspective, or alternate among them in order to shift and focus attention on information that might otherwise be ignored. Refocusing attention and enhancing perspective can result in extraordinary interpretations of ordinary facts. "Successful strategies have often contemplated the same facts that everyone knew, and they have invented startling insights." (Mintzberg, p. 171)

The cognitive school highlights the value of multiple reference frames and encourages their utilization. The often assertive and divergent opinions within Naval Special Warfare, although viewed as a possible stumbling block to implementation by traditional strategic planning standards, can be a source of insight and organizational strength within the cognitive school.

3. Learning School

The learning school highlights the responsive nature of strategic planning and implementation. Strategic planning within the learning school is an emergent process. The following observation can be seen as a criticism of the traditional strategic planning processes and as an impetus for emergent strategies.

> The new world is full of unintended consequences and counterintuitive outcomes. In such a world, the map to the future cannot be drawn in advance. We cannot know enough to set forth a meaningful vision or to plan productively. In fact, engaging in such activities in the belief that we can predict the future and, to a degree, control it, is probably both illusory and dangerous, in that it allows a false and potentially debilitating sense of security (Tetenbaum, p. 24)

The learning perspective addresses this lack of control and predictability; within the learning school a strategic plan forms and evolves, over time, through small steps. Instead of springing to life fully formed by executive directive, as in the planning school, it is a product of small initiatives and recurring adjustments. Collins and Porras, in their six-year study that led to Built to Last, discovered that visionary companies, premier institutions with long histories of making a significant impact on the world around them, built an incremental approach to strategy making into their organizations. They encouraged experimentation and risk-taking. They tried many things and kept what worked. The Tipping Point – How Little Things Can Make a Big Difference, Malcolm Gladwell's examination of why major societal changes often happen suddenly and unexpectedly, is another testimony to incrementalism, to the cumulative power of isolated programs and minor events.

The learning approach to strategic planning is ideal for an interconnected, uncertain, and chaordic environment. The collaborative approach to strategic planning and organizational adaptation, proposed in the next chapter, is supported by the lessons of the learning school. The following prescriptions for logical incrementalism – continuous change, incremental or partial solutions, and increased organizational awareness and flexibility - are important lessons from the learning school.

a. Strive for Continuous Change

An important lesson from the learning school, and from the visionary companies studied in Built to Last, is the need to engage in continuous change. Collins and Porras captured this theme in a conceptual framework that sought to "preserve the core while stimulating progress." Preserving the core will be discussed within the cultural school; striving for continuous change and stimulating progress are similar concepts. Continuous change fights the inflexibility and entropy that is a natural product of success. The "we have arrived" syndrome is detrimental to learning and adaptation. Inherent in the goal of continuous change is the realization that strategy is not a linear process with a static end-state; the goal is constant progress and improvement, not a stationary outcome. As Mintzberg points out, the value of strategy is found in its adaptability: "The validity of strategy lies not in its pristine clarity or rigorously maintained structure, but in its capacity to capture the initiative, to deal with unknowable events, to redeploy and concentrate resources as new opportunities and thrusts emerge, and thus to use resources most effectively when selected." (Mintzberg, p. 184)

b. Pursue Tactical Sifts and Partial Solutions

As discussed earlier, The Tipping Point documents how seemingly unrelated events or solutions to apparently unrelated problems tended to flow together into unexpected and powerful combinations. Gladwell showed how apparently isolated and disjointed events combine, reinforce, and propel each other towards surprising and far-reaching outcomes. With surprising regularity, small events tend to accumulate until a tipping point is reached that, when crossed, creates sweeping and disproportional effects. This mutually reinforcing tendency of minor events to combine and create major

consequences can be harnessed. "Tipping points are a reaffirmation of the potential for change and the power of intelligent action." (Gladwell, p. 259)

Given the increased interconnectivity and growing stakeholder community that Naval Special Warfare faces, a series of small programs can succeed, delivering disproportionate results, where grand programs with broad objectives would encounter overwhelming opposition or succumb to bureaucratic resistance, both internal and external.

c. Build Organizational Awareness and Consciously Structure Flexibility

An organization's formal information system is designed to screen and regulate the flow of information. The objective is to separate the important from the unimportant. While this is a necessary and essential function, organizational bias and a predisposed orientation can highlight the expected and negate the unexpected. This can blind an organization to strategic sea changes: "Rarely do the earliest signs for strategic change come from the company's formal horizon scanning or reporting systems. Instead, initial sensing of needs for major strategic changes is often described as 'something you feel uneasy about,' 'inconsistencies' or 'anomalies'." (Mintzberg, p. 183)

Scrutinizing issues and trends from multiple perspectives, challenging the status quo, talking and listening to people outside of the ordinary decision channels, creating networks and informal information avenues are critical to building organizational awareness that extends beyond the "party line."

In the early stages of strategy development, generating options based on this increased awareness while avoiding irreversible commitments to any single option increases the capacity for flexible response to evolving circumstances.

However, latent flexibility is quite different than organizational capability to respond; flexibility is about options and attitude while the capability to utilize that flexibility requires fiscal and human resources available to engage those options. Networks, for example, can be responsive and adaptive, but without sufficient resources, fiscal and organizational, any organization, even a networked organization, will lack the capacity to tap these inherent strengths. Flexible capacity should be structured, hard-wired, into an organization.

> One cannot possibly predict the precise form or timing of all important threats and opportunities a firm may encounter. Logic dictates therefore that mangers purposely design flexibility into their organizations and have resources ready to deploy incrementally as events demand. This requires . . . creating sufficient resource buffers, or slacks, to respond as events actually do unfurl . . . developing and positioning "champions" who will be motivated to take advantage of specific opportunities as they occur; and shortening decision lines between such persons and the top for rapid system response (Mintzberg, p. 183)

These lessons and the approaches that flow from them rely upon "the initiative and skills of people who act deep within the corporate hierarchy, as internal entrepreneurs (intrapeneurship)" (Mintzberg, p. 186) Understanding this dependence upon front-line initiative, the learning school challenges the assertion that strategy formation originates at the top of an organization.

> Researchers sympathetic to the learning approach found that when significant strategic redirection did take place, it rarely originated from a formal planning effort, indeed often not even in the offices of the senior management. Instead strategies could be traced back to a variety of little decisions made by all sorts of different people (sometimes accidentally or serendipitously, with no thought of their strategic consequences) Taken together over time, these small changes often produced major shifts in direction (Mintzberg, pp. 177-78)

The most effective pursuit of these vital lessons is through the creation of collaborative networks; this topic is discussed in detail in the next chapter, but the collective nature of collaboration and its reliance upon shared interests and meanings is directly related to the cultural school. Both the learning and the cultural schools view strategy from the inside out. While the learning school emphasizes the capability for discovery and modification, the cultural school accentuates organizational potential rooted in culture. Both perspectives are important.

4. Cultural School

For this school, strategy formation is a collective process; strategy is driven by organizational ideology – a strong set of passionate beliefs – by implicit rules of behavior and universal motivations, universal, at least, within the organization. Collins and Porras have characterized the dominant culture of visionary organizations as the "core." Preserving, reinforcing, and strengthening the core was closely linked, they believed, to the success of visionary companies. The visionary organizations studied in *Built to Last* were described as having "cult-like cultures." Common characteristics of cult-like cultures include: a fervently held ideology, a strong indoctrination process, an insistence upon tightness of fit between members and the organization, and an aura of elitism.

Strong cultures are embedded in organizational processes, in the language used by its members, in the stories members tell, and the way they treat each other and outsiders. Powerful cultures are inescapable. Collins and Porras characterize this type of culture as having clearly defined organizational values, purpose, and identity as well as uncompromising standards; visionary companies are great places to work if you fit in, if you don't, then you won't last long.

> "Visionary"...does not mean soft and undisciplined. Quite the contrary. Because the visionary companies have such clarity about who they are, what they're all about, and what they're trying to achieve, they tend to not have much room for people unwilling or unsuited to their demanding standards. (Collins and Porras, p. 121)

The culture of Naval Special Warfare has all the characteristics of a cult-like culture. However, its ideology – based on a warrior's ethos, unorthodox approaches, flexibility and adaptability – is implicit; a widely accepted NSW ideology appropriate to the early 21st century has yet to be explicitly articulated and embraced by the entire community. This fact may contribute to a desire expressed among junior officers for a clear strategic vision. During the RAND interviews, discussed earlier, several senior officers commented on this relatively new phenomenon. One well-respected senior leader expressed his exasperation during his SEAL Team command tour with junior SEAL officers who repeatedly asked about Naval Special Warfare's "vision." This quest for a vision is a product of the turbulent post-Cold War environment and is an unfamiliar concern to senior leaders who, as junior officers, clearly understood Naval Special Warfare's purpose and vision during the Cold War.

During uncertain times ideology and culture must be reinforced and revisited. The familiar tendency of front-line personnel to focus on operational concerns becomes

diverted when the connection between operations and larger objectives becomes blurred, when environmental change alters the link between the what and the why of an organization's existence. Collins and Porras found that in times of crisis and uncertainty visionary companies returned to their guiding principles, to their core ideology. A firm sense of "this is who we are; this is what we stand for; this is what we're all about." (Collins and Porras, p. 54) provides a foundation to address changing or threatening circumstances. Discussing core ideology throughout the entire organization and developing explicit shared meanings is not "touch-feely" idealism; it is a key response mechanism of visionary companies to discontinuous change.

Implicit ideologies can lack the forcefulness necessary to guide and unite an organization. Additionally, they may hinder organizational adaptation. Cultures can resist change if old strategies and legacy processes are mistaken as essential elements of the culture. Culture can also act as a lens that can blind an organization to changing external circumstances.

This resistance to change can be overcome or short-circuited by imbedding flexibility and innovation as part of the culture; by distinguishing what is truly core and marking everything else open to challenge and change. The key is to identify the essential core, to protect it and promote it, "to impose tight ideological control *and* simultaneously provide wide operating autonomy that encourages individual initiative." (Collins and Porras, p. 139)

> Companies seeking an "empowered" or decentralize work environment should first and foremost impose a tight ideology, screen and indoctrinate people into that ideology, eject the viruses [those that do not fit the organization or will not accept its ideology], and give those who remain the tremendous sense of responsibility that comes with membership in an elite organization. ... It means, in short, understanding that cult-like tightness around an ideology actually *enables* a company to turn people loose to experiment, change, adapt, and – above all – to *act*. (Collins and Porras, p. 138)

Culture and ideology are so important because they provide a solid foundation during turbulent times. In a changing world, no matter what comes, the core of visionary companies is an anchor. Beyond this essential factor, cultures tend to be distinctive and this uniqueness may be an important source of strategic advantage. Resource-based theory, a theory within the field of strategic management, emphasizes how unique resources – physical, human, and organizational – may allow an organization to develop a sustained competitive advantage. "To be a key resource, an asset must posses four attributes: it must be valuable, it must be rare, there must be no substitute for the resource and it must be imperfectly imitable because of unique historical conditions, casual ambiguity or social complexity." (Pringle and Kroll, p. 740) Culture, especially a cult-like culture, fits this definition. The unique culture of Naval Special Warfare is a strategic asset that should be nurtured and exploited. The collaborative process, discussed in the next chapter, can strengthen and harness this culture.

D. SUMMARY AND COMPARISON

Traditional strategic planning is based upon the assumptions of the design and planning schools and is appropriate in a predictable and stable environment characterized by evolutionary change. This type of planning provides clear command

and control, definitive areas of responsibility, and rigorously evaluated results. It is oriented toward solving problems and producing a detailed plan to achieve a clear end state. Decision-making is streamlined because there are few participants in the processes. Participants are drawn from senior leadership and those with recognized expertise; outsiders are excluded. The process itself is linear, comprised of distinct events separated in time.

Old school strategic planning is ill suited for a turbulent and complex environment. Its linear and phased process often delays or eliminates feedback. Furthermore, implementation can be difficult because planning and implementation are two distinct events performed by different groups. In a rapidly changing and uncertain environment the optimal end-state is never certain. This uncertainty requires new processes and different practices that rely upon emergent strategies that are responsive to opportunities and shifts.

Alternative strategic planning is designed to operate in a complex, chaotic, and interconnected environment. It is prepared for and expects both evolutionary and discontinuous change. Instead of focusing on *the* right solution it is oriented towards learning about the strategic context and its associated problems as well as discovering opportunities. It pursues an inclusive process that seeks to combine alternative frames of reference into unexpected and valuable combinations. Instead of designing a solution it prepares an organization to deal with unknowable events, to both proactively and reactively address opportunities. It seeks to combine partial solutions and pursue continuous progress and change.

While alternative strategies are appropriate for a complex and turbulent

environment they cannot match the degree of control or the depth and breadth of evaluation found within traditional strategic planning. Boundaries become blurry and permeable. Responsibility for strategic planning and organizational success is shared throughout the organization, yet senior management retains ultimate control of strategic direction setting. Table 5-2 summarizes the traditional and the alternative strategic approaches.

E. CONCLUSIONS

The design and planning schools produce strategic plans that are directive, controlling, and detailed. Direction, control and clarity are important; they cannot be abandoned. However, the rigid process of this type of strategic planning can be inflexible and limiting. A process is needed that combines the necessary elements of analysis, control, direction, and structure familiar to traditional strategic planning with the less tangible aspects of organizational adaptation, namely vision, perspective, participation, and emergent adaptation. These are characteristics identified with the entrepreneurial, cognitive, social and learning schools of strategic planning.

The shortcoming of these alternative schools is that, although descriptive and insightful, they rarely discuss a process to achieve their descriptions. While the design and planning schools provide procedures and processes, alternative schools identify important elements of strategic planning but do not identify processes that address these elements. Significant insights are provided to the strategic planner but the techniques and skills needed to implement these insights are often omitted.

Collaboration is a process and a technique that can combine the power of the entrepreneurial spirit, the emergent insight of the learning school and the unique

resources of a strong culture. Not only does it utilize these three important factors but also it strengthens and reinforces them. A collaborative strategic planning process can be incorporated into a modified and more flexible planning, programming and budgeting system. Planning, controlling and detailed analysis can be combined with emergent, empowering, and visionary processes. The next chapter proposes a framework for organizational change that relies upon collaboration and incorporates the insights of the alternative strategic planning model discussed in this chapter.

Attributes	Traditional Strategic Planning	Alternative Strategic Planning
Appropriate Environment	Stable and predictable where change is evolutionary	Complex, chaotic, inter-connected, filled with ambiguity, paradox, and discontinuous change
Focus	"The" solution / detailed plan to clear end state. Fix the problem "either / or"	Leaning about the problem Discover opportunities "both / and"
Objective	Problem solving, establishing equilibrium	Solution building, coping with the environment (complexity, etc.), prototyping (Jensen, p. 120)
Participants	No outsiders Few participants	"outsiders" as participants Many participants representative of the whole system (top, bottom, inside, outside)
Responsibility	Upper management responsible for strategic planning and future success	Shared responsibility, co-creating the future, empowered workforce
Ownership	Expert-driven process "Their plan"; No ownership at the implementation level.	Balanced expertise – everyone has a contribution; system wide buy-in
Control	Executives retain power and control	Shared power; commitment to democracy. However, management sets the boundaries and constraints– not a free-for-all.
Direction Setting	Top-down direction from senior leaders: one-way flow.	Multiple inputs; give and take; participatory and collaborative
Sequence of Events	Linear, distinct events separated in time	Concurrent and iterative
Feedback	Delayed, eliminated or cutoff	Immediate, real time feedback
Assumptions	Neutral or negative toward employees, management knows best, control is essential	Everyone has insight. Trust. Responsibility should be shared and accepted throughout the organization
Strengths	Clear command and control, detailed plans with easily evaluated objectives.	Agility, adaptability, speed, encourages dynamic change and innovation

Table 5-1 Comparison of Traditional and Alternative Strategic Planning Methods

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VI. A FRAMEWORK FOR ORGANIZATIONAL CHANGE

This chapter provides a conceptual framework to aid in the design, evaluation, and sequencing of NSW change initiatives. Building upon the insights from previous chapters it focuses on increasing organizational flexibility and responsiveness.

> Nobody argues anymore with the notion that what it takes to succeed today is radically different from what it took yesterday and that tomorrow's success factors will be different as well. The speed of changes in . . . an age of accelerating technological innovation means that there are no longer any certainties. . . . Nimble, creative, and courageous organizations can thrive as never before. To succeed in this environment, leaders need to rethink the traditional ways of getting things done. (Bossidy, p. xix)

A. THE NEED FOR REEXAMINATION

This insight from Lawrence Bossidy, Chairman and CEO of Allied Signal Corporation, concerning the revolution in business practices is as relevant to military organizations as it is to private businesses. Moreover, the implications of the coming revolution in military affairs and future warfare, discussed in Chapters II and III, extend the validity of this observation beyond business practices and into military affairs.

"Nimble, creative, and courageous" are familiar descriptions for Naval Special Warfare tactical units. The challenge for NSW is to reproduce these prevalent personal and small unit attributes throughout the entire organizational structure to become a model for future military organizational adaptation. It is only human nature to seek

stability and to become accustomed to patterns of activity. At the tactical level, SEALs are trained to avoid repetitive operational patterns. Yet, at the organizational level custom becomes entrenched.

In an era of rapid and discontinuous change, clinging to well-established but increasingly inappropriate organizational processes is as dangerous as sloppy operational tactics and procedures. "Doing today's work in today's way becomes quickly outdated." (Ashkenas, p. 8) In an altered world the old processes and models of organization are increasingly irrelevant, ineffective, and dangerous. Clinging to what worked in the past in the face of new and different circumstances can produce grave consequences. "Examine the consequences of the condition. When does an organizational practice become a pathology? (For example, hierarchy-based management was fine in slow-moving businesses, but in businesses that need quick response time and flexibility, hierarchies can become pathologies)." (Prahalad, p. xvii) A fundamental reexamination of strategies, structure, and process is necessary in order to properly adjust and adapt.

Unfortunately, new practices and processes are not easy to accept or implement. "Most managers have little appetite for either fundamentally rethinking strategy or creating radically new organizational capabilities. Both tasks require a capacity to forget as well as to learn." (Prahalad, p. xiii) Appropriate organizational adaptation, in addition to calling for new processes and organizational models, requires new ways of managing organizations and leading people. For those who have excelled at the old ways and standards of leadership, changes in style, roles, and process are unwelcome and often resisted.

Changes will take time and perseverance, repetition and correction, failure and readjustment. Adapting NSW to the 21st century must be a constant focus of every member of Naval Special Warfare; this is not a part time endeavor. "Reinventing the company is not about a single initiative; neither is it an off-line activity. It is on-line, involves multiple initiatives, and is cumulative . . . Success in current business is critical to provide necessary space and confidence to the organization." (Prahalad, p. xvii) Naval Special Warfare must continue to excel today even as it adapts to current circumstances and evolves to meet future requirements.

However, improving and indefinitely prolonging the use of current practices and processes that are declining in utility and applicability is comparable to a last-minute engine tune-up on the Titanic; increased engine performance on a sinking ship is useless. Traditional organizations, utilizing legacy structures, practices, and processes, have not yet "hit the iceberg" but they are foundering, awash in a sea of change. Naval Special Warfare is not broken. However, NSW's industrial age structure and mindset will increasingly deny it the flexibility and agility to respond in the information age.

The choice for Naval Special Warfare is between increasing the efficiency of the current organization – opting for a tune-up – or adapting and changing the organization for an altered world – undertaking a major refitting and overhaul. "Under pressure for performance in a changing competitive environment, managers seem to gravitate toward improving the efficiency of existing organizational arrangements and implementing existing strategies. This is 'doing what I know' better." (Prahalad, p. xiv) The previous example of the Department of Defense's

response to the end of the Cold War (see p. 86 of this thesis) illustrates this point. The Vietnam War is a classic military example. Despite prolonged conflict and frustrating results, the fundamental assumptions of strategy and purpose were never reexamined, or, perhaps, never fully examined from the beginning.[20] Strategic and policy failures repeatedly drew a response of requesting more troops and a focus on improved execution of current strategies.[21] In the transformation from the industrial age to the information age, improving current practices – what organizations know – is a dangerous substitution for reexamining the relevance of organizational knowledge, for asking if what the organization knows is relevant and applicable to the current situation.

Naval Special Warfare needs a reevaluation, an adjustment, a transformation of structure and process appropriate for altered circumstances, not better, more efficient application of what has become ill-suited concepts and approaches. New models must be constructed. "It is the appetite for this process of reexamining and reinventing that will separate the builders (leaders) from caretakers and the undertakers (managers and cautious administrators)." (Prahalad, p. xiv) In the turbulent world of the early 21st century, NSW organizational adaptation requires motivated and persistent builders and leaders. The time to begin building is upon us.

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[20] Spanier and Hook (2000), American Foreign Policy Since World War II, Fifteenth Edition, Congressional Quarterly Press argues this very point.

[21] Harry Summers, in his book On Strategy, presents the conventional argument for improved performance and an escalation of the ground war into North Vietnam. In contrast, Andrew Krepinevich in his book The Army and Vietnam, is critical of the immovable strategy and processes of the war. Sorley, L. (1999), A Better War – The Unexamined Victories and Final Tragedy of America's Last Years in Vietnam, documents successes at the end of the Vietnam War when conventional forces were departing and unconventional strategies were reevaluated.

B. SHIFTING SUCCESS FACTORS

Current business notions about the keys to organizational efficiency are being reexamined; slash and cut drawdowns and asset reduction are being challenged by the concept of resource leveraging – creating unique and tailored bundles of capability drawn from throughout the organization. "Beset by the new competitive reality, firms typically start to focus on better asset management (reduction of working capital) as well as on reduction of investment requirements by selective outsourcing. However, vitality in the medium to longer term comes not from asset reduction but from resource leverage." (See Prahalad, p. xv)

This is not a new concept for Naval Special Warfare. NSW Task Units and Task Groups are formed by drawing resources together to meet an operational need. Adaptive force packaging is an operational manifestation of resource leveraging. What is required of Naval Special Warfare is to apply this concept throughout the organization, across internal and external boundaries and beyond operational and tactical processes.

Resource leveraging requires "removing the restrictions, real and imaginary, imposed on individuals and teams by formal structures." (Prahalad, p. xvi) It entails a "shift from rigid to permeable organizational structures and processes." (Ashkenas, p. 1) Ashkenas offers the term "boundaryless organization" as a descriptor of institutions that are able to cross internal and external boundaries to facilitate leveraging resources and thereby creating value. These organizations create and sustain new and different organizational characteristics – success factors – that facilitate success in the information age. Just as some outdated organizational practices have become

pathologies, "the old success factors have become liabilities, and the new success factors look very different from the old." (Ashkenas, p. 7) "Dominant themes that are critical to resource leverage are speed (not size), flexibility (not rigidity, often disguised as role clarity), integration (not specialization), and innovation (not control)." (Prahalad, p. xv)

Descriptions of flexibility and innovation in a "boundaryless" organization echo observations from Chapter V concerning the insights of the entrepreneurial and learning schools of strategic planning and the constraints of the planning school.

> Organizations pursue multiple paths, experiment, and make rapid shifts. Role clarity, the old success factor, often constrains flexibility. . . . . Organizations that succeed in a world of rapid change find innovations essential . . . Boundaryless organizations constantly search for the new, the different, the unthinkable. They create innovative processes and environments that encourage and reward creativity, whereas in organizations that focus on control, the creative spirit and people who innovate are often stifled by systems of approvals, checks, and double-checks, because innovation threatens standard operating procedures. (Ashkenas, p. 8)

Speed, flexibility, and innovation are fundamental to Naval Special Warfare. However, these attributes, although routinely exercised on the personal and tactical level, are often overcome by bureaucratic rigidity and a subtle but persistent conventional mentality[22] within the larger NSW organizational structure and the Department of Defense. Integration is a less familiar concept. It entails "mechanisms to pull diverse task activities together . . . [and] processes that carry concepts of change into the institutional bloodstream, disseminating new initiatives quickly, and mobilizing the right resources to make things happen." (Ashkenas, p. 8)

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[22] See NSWG-1 (2000), *The Plan*

In the pursuit of information age adjustment, Naval Special Warfare should make every effort to instill these new success factors into all aspects of its organization.

Resource leveraging is, in essence, about crossing organizational boundaries in order to maximize capability.

> We are talking about making boundaries more permeable, allowing greater fluidity of movement throughout the organization. In essence, we are suggesting that the traditional notion of boundaries as fixed barriers or unyielding separators be replaced by an organic, biological view of boundaries as permeable, flexible, moveable membranes in a living evolving organism. . . . Information, resources, ideas, and energy pass throughout the membranes [of boundaryless organizations] quickly and easily so that the organization as a whole functions far better than each of it separate parts. (Ashkenas, p. 4)

Naval Special Warfare forces, NSW's unconventional mindset oriented on creativity and innovation, tactical platforms and technology, etc., in short, NSW resources, are uniquely suited for the turbulence of the 21st century and can provide "unconventional solutions to complex military problems." (NSWG-1, p. 2) However, organizational boundaries limit NSW's ability to efficiently package these resources or combine them with other resources outside of Naval Special Warfare. Faced with the possibility of future adversaries unencumbered by traditional organizations and process, the ability of NSW to cross boundaries and adaptively package resources is an information-age operational necessity.

C. MILITARY MISGIVINGS

It is probable that the military will have to struggle with the proposal to loosen historically rigid boundaries. Longstanding principles of command and control, along with a requirement for unambiguous assignment of responsibility and accountability in

combat, have been established and validated through centuries of warfare. The concept of permeable boundaries runs contrary to traditional rigid military hierarchies and painstakingly protected "stovepipe" organizations with their clearly and carefully delineated spans of control. Non-military organizational frameworks might be summarily dismissed as unsuitable or non-applicable to the unique circumstances of military organizations: "Some have argued that insights from other domains, such as those we will be drawing upon [including, complexity theory and the commercial sector], are not really relevant to the military organization because business is not warfare." (Alberts, p. 24)

Despite this possible apprehension, the information age requirements for speed, flexibility, integration, and innovation are unambiguous. The alternative and various perspectives presented in Chapters I through V lead, from different vantage points, to the same conclusions: increased organizational flexibility and adaptability will be essential in the 21st century. "There is a good argument to be made that the basic dynamics of the value-creation process are domain independent. . . . History supports the view that valuable insights have relevance across disparate domains." (Alberts, pp. 24-25)

Some traditionalists cling to familiar conceptions of command and control, but Network Centric Warfare[23], the Navy's experimental concept of operations, is challenging these traditional concepts and experimenting with new mechanisms for coordination and unified effort. Unfortunately, this innovation is being applied and tested within the Navy's traditional organizational framework. The current Navy, NSW, and DOD organizational structures and processes do not possess the required

[23] See Alberts, D., Garstka, J & Stein, F. (1998), Network Centric Warfare: Developing and Leveraging Information Superiority, DOD C4ISR Cooperative Research Program, Washington, D.C.

information age attributes; in fact, the current organizational model stifles speed, flexibility, integration and innovation. The Department of Defense should learn a lesson from the revolution in business practices before it is overtaken by a future military reality that finds it significantly unprepared.

> The stark reality is that each of these organizations [IBM, Philips, Mazda, Sony, General Motors . . .] slipped from invincible to vincible when it was faced with a rate of change that exceeded its capability to respond. When their worlds became highly unstable and turbulent, all these organizations lacked the flexibility and agility to act quickly. Their structures and boundaries had become too rigid and calcified. (Ashkenas, pp. 5-6)

In the current strategic context, one of the most important of all organizational characteristics will be an ability to adjust and adapt with speed, flexibility, and innovation. Organizations that lack this capability will see their relevance and value decline in the early 21st century. "A lack of organizational capacity to reconfigure physical and intellectual resources in new and creative ways [have] become their primary source of competitive weakness." (Prahalad, p. xvi)

While adjustments are necessary and flexibility is important, organizations should have some structure to their effort, some guiding model that helps them make sense of multiple initiatives and coordinates diverse efforts. A framework for change and adaptation is necessary.

D. FRAMEWORK

The following framework is intended to help Naval Special Warfare evaluate and synchronize change initiatives. This framework consists of three elements – boundaries, critical boundary dimensions, and system components. There are four types of organizational boundaries and within them four critical dimensions that affect the permeability, the rigidity or flexibility, of each boundary. Additionally, there are

four system components that support, sustain and affect the success of change initiatives within and across each type of boundary and boundary dimension. Figure 6-1 illustrates this framework.

1. Organizational Boundaries

The organizational boundaries are:

1. *Vertical*: the boundaries between levels and ranks of people
2. *Horizontal*: the boundaries between functions and disciplines
3. *External*: the boundaries between the organization and its suppliers, customers, and regulators
4. *Geographic*: the boundaries between nations, cultures, and markets (Ashkenas, p. 3)

Boundaries

Critical Dimensions ↓	Vertical Unit level NSW-wide	Horizontal Unit level NSW-wide	External NSW-wide Theater-wide	Geographic national/regional organizational	**System Components** ↓
Information	1. To what extent are the four components in place in our organization? Are they wired together properly? What specific steps should we take to tighten up the wiring? 2. Which of the four dimensions is most out of tune and could use some work? What specific steps can we take to tune this dimension in the proper direction? 3. If we tune one dimension, are there adjustments we need to make in the other three dimensions to keep our boundaries in tune? (Ashkenas, p. 105)				Alignment
Competence					Commitment
Authority					Cumulation
Rewards					Shared Mindset

Figure 6-1 Framework for Change

Naval Special Warfare should conduct an analysis of these boundaries on different levels. Specific boundary initiatives, for example, initiatives to loosen horizontal boundaries, may be similar at each level of analysis but the participants, the

scope, and the target of change may be different from level to level. For both the vertical and horizontal boundaries, NSW must examine the boundaries, critical dimensions, and system components at the unit level with local initiatives and internal focus and at a Naval Special Warfare community level, all commands within the claimancy of the Commander, Naval Special Warfare Command, with community-wide attention and effort. At the command level, critical dimensions and systems factors will be examined and adjusted, resulting in change initiatives that will be implemented to loosen local vertical (hierarchy) and horizontal (departmental) boundaries. At the same time, similar initiatives should be explored for the entire NSW claimancy with the goal of loosening echelon hierarchy and increasing NSW horizontal permeability across Naval Special Warfare's individual command boundaries.

Initiatives to loosen external boundaries should be applied at the NSW level, at the specific theater level (e.g., Pacific or Southern Theaters), and on a DOD/inter-agency level. The NSW level of analysis for external boundaries examines the same organizations and linkages as the horizontal NSW claimancy perspective. However, the types of initiatives required to loosen horizontal boundaries may have different, but equally important objectives than external boundary initiatives. Consequently, both the horizontal and external boundaries of the Naval Special Warfare community should be examined. In effect, this means looking at the same command relationships and boundaries from two different perspectives, horizontal and external.

The theater-level perspective supports a value-chain analysis where NSW, Navy, and Joint commands are links in a chain that produce, distribute, and control Naval special warfare "products" – operational units and unconventional capabilities – to the

end user, the Theater Commander. The DOD/inter-agency level encompasses a broader stakeholder analysis. These three different levels of analysis together provide for a broad examination of NSW external boundaries that, when properly adjusted, will release a significant resource leverage capability.

The examination of geographic boundaries should include the cultural, ideological, and historical groundings of traditional nations and geographic regions as well as an analysis of the cultural and ideological foundations of outside agencies that may be "worlds apart" culturally or philosophically from NSW. These organizations include: non-DOD government organizations, private volunteer organizations (PVOs), and non-governmental organizations (NGOs) As discussed earlier, the rise of deep coalitions, increased inter-agency interaction and increasing PVO/NGO influence (see p. 27 of this thesis) necessitate the crossing of these invisible, implicit boundaries. The geographic boundary perspective offers valuable insights not available from the external boundary perspective.

2. Critical Boundary Dimensions

Boundaries exist along a continuum from highly controlled to loose. For example, a vertical boundary can be established anywhere along a continuum delimited by the existence of a very rigid hierarchy on one extreme and the absence of any chain of command mechanism on the other extreme. Put another way, boundary adjustment is not an either/or choice. As an example and countering a common assumption, adjusting vertical boundaries is not a choice between either, (a) rigid vertical hierarchies and the resulting tight control, or (b) no one in charge and, as a result, no control. The four critical boundary dimensions – information, competence, authority, and rewards –

contribute to the position of each boundary along this control continuum. For example, sharing information throughout the organization tends to loosen vertical boundaries while shifting rewards from individual to team based, multi-department criteria aids in loosening horizontal boundaries.

3. System Components

System components are prerequisites for significant and sustained change. These components include:

a. Alignment Between Change Efforts and Business Strategy

Change efforts must be viewed by everyone in the organization as critical to the day-to-day accomplishment of the organization's purpose. Every initiative should contribute to the overall strategy and not be an end in itself or an isolated "pet project."

b. Sustained and Visible Leadership Commitment

Leadership commitment is critical to translating the concepts of permeable boundaries into specific behaviors. Without visible and sustained high-level commitment members throughout the organization will see change efforts as passing fads and hollow words. Continuous attention to and participation in change initiatives by senior leadership, clear and unrelenting communication, and constant actions, both big and small, signal leadership commitment and encourage broader involvement and enthusiasm.

c. Cumulative Approach Mentality

Insights from the "learning school" and The Tipping Point (discussed in Chapter V), as well as complexity theory (Chapter IV) highlight the significance of small actions and their tendency to build to important and disproportionate consequences.

Change efforts should be viewed from this perspective. Ideally, separate initiatives build upon past and concurrent efforts.

> [Organizational initiatives must be seen] as evolutionary not revolutionary. Management practices are seen as revolutionary when each new management technique . . . is regarded as a redeemer of the previous practice, now regarded as antiquated and inept. Revolutionary management practices easily become fads to be tasted and tested, then rejected and renounced. Moreover, champions of different initiatives may end up competing against each other for management attention. Practices are evolutionary when new management initiatives are intended to add value to previous initiatives. . . . Evolutionary practices encourage managers to sustain commitment to change over long periods. No one practice makes a healthy hierarchy; rather, it is the cumulation of many practices that makes the impact. For example, Tony Larussa, manager for the Oakland A's baseball team has devised a "law of accumulation" [which declares that little things add up, so focus on them]. (Ashkenas, p 70)

d. Shared Mindset

The importance and impact of a common organizational understanding and vision has been discussed in Chapters IV and V. Shared meanings built from a collaborative approach to wicked problems (Chapter IV), insights from Built to Last concerning the core ideologies of visionary companies, and the cultural school perspective to strategic planning (Chapter V) all emphasize the irreplaceable value of an organization-wide shared mindset. This shared understanding reduces the need for vertical control and aids in cross boundary interaction. "Layers of supervision can be removed when employees share the values and beliefs of the firm and choose to do the right thing in the right way." (Ashkenas, p. 71)

E. CONCLUSIONS

This chapter provided a conceptual framework to aid in the design, evaluation, and sequencing of NSW change initiatives. The focus of this framework is resource leveraging, increasing the speed and flexibility of NSW. Improving the flow of information throughout NSW, developing the competence to achieve results regardless of position or location within NSW, and encouraging those adequately informed and competent to act and innovate with authority are necessary to span organizational boundaries. The next chapter uses this framework to provide examples of specific actions that would loosen Naval Special Warfare's organizational boundaries, resulting in a warfighting institution tailored to the 21st century. These examples offer a baseline from which NSW could begin a comprehensive examination of change efforts designed to prepare itself for the information age.

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VII. THE FRAMEWORK IN ACTION[24]

A. CREATING AN ACTION STRATEGY

Chapter VI summarized a framework that provides the elements necessary for high performance change. However, these elements in isolation are not enough to create or sustain effective and positive change. They must be tied together and adjusted to each other and to a changing situation. "Managers need to engage both in wiring [of system components - alignment, commitment, cumulation, and mindset], to provide the framework for the long term, and tuning [of critical dimensions – information, competence, authority, and awards] to generate momentum for the short term." (Ashkenas, p. 64) Isolated initiatives are doomed to failure.

Applying the framework presented in Chapter VI, this chapter recommends specific actions to loosen vertical, horizontal, external, and geographic boundaries. The capability to cross these boundaries improves organizational speed, flexibility, integration, and innovation that in turn maximize Naval Special Warfare's ability to leverage organizational resources. This chapter is not a comprehensive agenda for change. Instead it is a "strawman" from which Naval Special Warfare could begin developing an action plan. Naval Special Warfare's action plan should be a compilation of local and community-wide initiatives developed through broad stakeholder involvement and aligned to NSW goals.

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[24] Ashkenas, R., Ulrich, D., Jick, T, and Kerr, S. (1998), The Boundaryless Organization – Breaking the Chains of Organizational Structure, Jossey-Bass, San Francisco, CA is the primary source for this chapter. This guide to organizational transformation, based on the General Electric transformation led by retiring CEO Jack Welch, was chosen because it offers a whole-system perspective, combines many of the insights from the entrepreneurial, cultural, learning, and cognitive schools within strategic planning, and provides a collaborative approach to organizational change.

Throughout Naval Special Warfare many issues have been identified that demand attention, including: operational employment and concerns about overextension and personnel tempo; retention; morale; leadership development and utilization; support function streamlining and consolidation; the use and maximization of new technologies; the appropriate reaction to recent social and political changes; relevancy in a changing world; as well as timely responses to perceived threats and opportunities. There is no single program that will address all of these issues; in fact, there is no single program that can properly address only one of these issues. These issues are part of a complex, self-adaptive system that consistently frustrates attempts to separate and "fix" elements of the system in isolation. (Refer to Chapter IV.)

"Creating a healthy . . . [organization] is an organic process – the organizational equivalent to a personal fitness plan. . . . Leaders must implement a systemic process, sustained over time, that puts the various change activities together properly." (Ashkenas, p. 62) This requires monitoring the "fitness" of the organization and continuously altering the regimen of initiatives to reduce weaknesses and maintain strengths. There are no fire-and-forget approaches to organizational adaptation.

B. LOOSENING VERTICAL BOUNDARIES

Hierarchies, especially in the military, are necessary. A clear, working, and responsive chain of command is essential for military success. This section discusses how to loosen vertical boundaries. The hierarchies that define these vertical boundaries will change little; however, how the hierarchy functions and the roles at different levels may change a great deal. "Most organizations today have hierarchies designed around the old success factors of size, role clarity, specialization, and control." (Ashkenas, p. 40)

As a result, most organizations fixate on control and, as a result, timely action is inhibited, innovation and initiative are often suppressed and organizational responsiveness is limited.

Naval Special Warfare, at the operational level, has long experience with adjusting vertical boundaries. In the field, orders are obeyed all but instantly, almost instinctively – small-unit immediate action drills (i.e., response to enemy fire) and "go/no-go" orders from higher authority are examples – yet the hierarchy is loose enough to allow individual initiative at the appropriate time and place. Appropriate and permeable vertical boundaries at the tactical level, however, have not translated into an organization-wide characteristic. Throughout Naval Special Warfare vertical boundaries should be examined and adjusted.

1. Critical Vertical Boundary Dimensions

In adjusting vertical boundaries, leaders will move "switches" from controlled to loose on four critical dimensions.

- *Information* moves from information closely held or integrated at the top to information sharing throughout the organization.
- *Competence* moves from leadership skills exercised at senior levels and technical skills exercised at lower levels to competencies distributed through all levels
- *Authority* moves from decisions made only at the top to decisions made all along the line, at whatever points are appropriate.
- *Rewards* move from rewards based on position to rewards and incentives based on accomplishment (Ashkenas, p. 43)

a. Information

As vertical boundaries are relaxed, data and ideas flow freely throughout the organization. This shared information helps create shared meanings, a common organizational vision, a widespread sense of purpose and an understanding of

organizational objectives. "Understanding the *why*, they [organizational members] are more likely to accept the *what*. Shared information makes the boundaryless organization like a hologram [see Chapter IV, p. 74] in that every part of it has all the attributes of the whole. Each employee or team of employees can set goals consistent with the overall organizational goals." (Ashkenas, p. 44)

The following actions are examples of how Naval Special Warfare can increase information sharing and loosen vertical boundaries:

- Align channel and message.
- Share good and bad news.
- Use both cognitive and emotive news.
- Use information to encourage change (Ashkenas, p. 74)

(1) Align channel and message. There are two primary purposes of communication; the first is to share information and the second is to shape or influence behavior. The method of communication should be compatible with the purpose of the communicated message. As any good Navy Chief knows, behavior influencing is best achieved through face-to-face communication. Sharing of information, in contrast, is more appropriately conducted through static or interactive media – newsletters, memos, telephone, e-mail – where the information can be stored, retrieved, and forwarded as necessary.

NSW, along with the rest of the Department of Defense, is mired in legacy information channels and processes. For example, morning command musters, officer's call (O-call), message/department-head meetings and other "communication meetings" are time wasters. The same information – routine assignment of tasks, internal coordination and deconfliction, and progress or activity reports – can be shared more efficiently through static media, this includes e-mail,

mutually updated and shared schedule or calendar software, project manager software, etc. The key is to make information available to everyone who needs it in the way they need it without wasting the time of those uninterested or not involved.

Communication is especially critical during organizational restructuring (NSW Force 21) or throughout significant, long-term, high-impact projects (Project 21). There is a tremendous need, throughout the organization, for information. To fill this need and to coordinate communication channels with various messages, Naval Special Warfare should develop a comprehensive communication plan. A strong NSW communication plan would support implementation of NSW Force 21 and Project 21. This plan would identify what information is shared, with who, as well as when and how. Recommended communication plan items are introduced throughout this chapter.

(2) Share good and bad news. During times of transition rumors of change and upheaval run rampant. Clear, consistent, and complete communication helps reduce distractions, focus effort, and ease the implementation of change efforts. Every member of Naval Special Warfare should know enough about NSW – its vision and objectives, its change initiatives, and the obstacles and opportunities associated with them – to speak knowledgeably to anyone inside or outside the organization.

(3) Use both cognitive and emotive news. NSW Force 21 and Project 21, as well as future organizational adjustments, are major organizational and conceptual departures from legacy processes and procedures. Although attempts at communicating the cognitive and rational justification for these programs are ongoing, the emotional ties to familiar organizational and action patterns can impede

implementation. In addition to the cognitive news, that is facts, figures, and detailed descriptions of transition activities and objectives, the emotional commitment of senior leaders and the emotional impacts of transformation should be communicated; this emotive news is often ignored. Rational analysis, facts and figures, often overshadow and silence emotional messages. Yet, both are needed to motivate Naval Special Warfare for change.

(4) Use information to encourage change. "John Kotter and Jim Heskitt of Harvard University found that during organizational change, management usually undercommunicates the vision by a factor of ten. So consider what you should say and how often you should say it, and multiply your efforts many times over." (Baum, p. 30) This point should encourage a reevaluation of any change effort communication plan. There can never be too much communication; fortunately, technology provides the means to make communication constant and nearly instantaneous. Here is one example of ever-present communication.

> The management team created an interactive database, using Lotus Notes technology, so that any . . . employee could raise questions, make comments, or voice concerns. That database was then used to stimulate an ongoing "virtual dialogue" among hundreds of affected employees. In addition, management set up a formal "discussion group" of representatives from the key functional groups to think through all ramifications of the change in such areas as staffing, job rotation, skill mix, training, and compensation, posting the notes from their meetings on the database. The result of this open communication "blitz" was fascinating: employees started pressing management to "get on with the change," to stop talking about it and actually make it happen. (Ashkenas, p. 82)

b. Competence

The basic bureaucratic organizational model clearly defines a role for every player in the hierarchy; the main function of senior managers is to orchestrate the multiple roles within the organization. However, within the boundaryless organization role clarity is replaced by flexibility. The organization with permeable vertical boundaries realizes that skill, not position, defines ability. Consequently, individuals with the appropriate talents and training are encouraged to take action, in proportion to their skill level and their access to necessary information, guided by organizational objectives and regardless of their position within the organization. This increased flexibility allows organizations to leverage resources throughout the organization and utilize talent wherever it is found.

The following competency building actions are recommended to increase the breadth and depth of Naval Special Warfare organizational fitness, developing capabilities that can be leveraged across vertical boundaries:

- Conduct a competence audit.
- Improve staffing.
- Train and develop.
- Establish a 360-degree feedback process (Ashkenas, p. 83)

(1) Conduct a competence audit. This audit examines currently held skills and future skill requirements. These competencies are divided into two categories, technical and cultural. Technical competencies are the skills required to do a job, while cultural competencies determine how employees interact with others and function at their job.

Findings from previous chapters – the need for increased collaboration, the rise of deep-coalitions, etc. – indicate that required cultural competencies may include: team-based problem solving and decision-making skills, the ability to foster a participatory environment, and increased cross-cultural awareness and sensitivity.

The purpose of the competence audit is to inventory current skills and identify future training requirements. This audit should attempt to identify the skills that Fleets, SOCs, and Theater Commanders will be demanding in the future; a smaller, much more tailored unconventional capability may be one requirement. If this is the case, a broad pool of competencies as a source to draw from along with individuals possessing the interpersonal skills necessary to flow in and out of tailored teams will be necessary. The competence audit can be the source of a database for matching individual skills with the specific yet changing needs of each dynamic and tailored small-unit package. Figure 7-1 provides a cursory NSW competence audit.

Types of Competence	Current NSW Skills	Changes Facing NSW	Skills NSW Will Need in the Future
Technical	Operational / Tactical Proficiency	Complexity Paradox Interconnectedness Wicked Problems Deep Coalitions	IT / Shareware, Increasing Technological Proficiency Broad Operational Competencies
Cultural	Unit-level Teamwork Country-to-Country Military Interaction	Social Changes Geopolitical Shifts Rapidly Advancing Information-age Technology	Team-based Problem Solving Collaborative Decision-making Deep cultural Awareness

Competence Gap

Figure 7-1 Cursory NSW Competence audit
(After Ashkenas, 1998, p. 84)

(2) Improve staffing. Private sector organizations have found that today's rapid organizational pace – turbulence, change, interconnectedness, etc. – has placed a high premium on leadership preparation. "Succession planning" in the business world is a key mechanism used to ensure that leaders are developed and prepared for possible future assignments. Fully developed backup talent and management depth ensures that the future leaders of the organization will continue organizational progress with as little on-the-job-training (OJT) and acclimatization as possible. OJT and past experience are not enough to prepare future leaders for the challenges of an altered geostrategic and organizational context.

A Naval Special Warfare succession plan would build upon the competence audit that identified necessary technical and cultural competencies at each level of the organization, i.e., Executive Officer, Commanding Officer, major command, and Flag command for officers as well as Chief Petty Officer, Senior Chief and Master Chief positions for enlisted. A Naval Special Warfare succession plan would not identify future Admirals or Master Chiefs. It would, however, develop training and mentoring programs to prepare NSW leaders for these crucial positions, regardless of which individual is ultimately selected. A great deal of this training could be achieved through distributed learning via the Internet where tailored courses are made available to users and "pulled" at their convenience.

(3) Train and develop. Naval Special Warfare operational training is well developed and justifiably the focus of the organization. However,

organizational training, i.e., administrative competency development, is underdeveloped and inadequate. A comprehensive training program should combine both operational and organizational training. Having identified key competencies, both operational and organizational, the next step is to create a core curriculum that provides tailored seminars, distributed learning, individual and team training (both operational and organizational/staff teams), and "development in place" opportunities.[25] This training program must revolve around competencies that are aligned with strategy – the NSW Vision, NSW Force 21, Project 21, etc. – and should leverage technology as much as possible through video conferencing, distributed learning, and comprehensive progression tracking and skills inventory.

(4) Establish a 360-degree feedback process. In a 360-degree feedback process supervisors, peers, and subordinates evaluate an individual's competencies from their varied perspectives. This provides the individual a 360-degree – up, down, and sideways – view of the perceptions of all those affected by his actions. Given this unusual breadth of feedback, areas for improvement and competence building are easily identified. Contrasted with traditional formal feedback from direct supervisors – Navy mandated mid-term counseling – a 360-degree feedback process moves beyond evaluation, promotion, and advancement considerations and focuses on competency inventory and improvement. Automated 360-degree programs and services are available[26] that maintain confidentiality, can be tailored to specific positions, and are fast and easy to use. It is important to make clear the purpose of the 360-degree evaluation because this process breaks with

[25] See R. Eichinger and M. Lombardo, "Twenty-two Ways to Develop Leadership in Staff Managers," Report #144 (Greensboro, N.C.: Center for Creative Leadership, 1990)
[26] Visit www.ez360.com for an example.

traditional performance and competency reviews. Will it strictly be used as a developmental tool (counseling) or more broadly used as official evaluation tool affecting Fitness Reports / Evaluations (FITREP/EVAL)? How will the data be used (i.e., development, training, assignment, succession planning, etc.)? What are the specific behaviors and characteristics to be appraised? Are they clearly defined? The significant preparation and training required to implement a 360-degree evaluation process will be well worth the effort.

Within Naval Special Warfare professional reputation is critical; it is constantly evaluated and readily discussed, except perhaps with the superior or peer under evaluation. In essence, 360-degree evaluations have always taken place, albeit on an unofficial and back channel level. An official 360-degree evaluation process will provide feedback and insight that is often missing in official mid-term counseling and will link professional reputation with competence building and development. The 360-degree review process is a significant tool for personnel development that can loosen vertical boundaries by broadening the perspectives and definitions of successful performance, moving from pleasing or appeasing the boss to team-based pursuit of organizational objectives.

c. Authority

Chapter V discussed the dislocation of decision-making and implementation inherent in traditional organizations influenced by the design and planning schools. Loosening vertical boundaries addresses this dislocation by encouraging the person closest to any particular issue to make the appropriate decision; the individuals who will live with the consequences of implementation have the authority

possible, enabling those most familiar with the situation to act immediately. Authority becomes a function of information and competence and is less dependent upon position or title. Responsiveness increases as the distance between decision-making and implementation is reduced. Shifting decision-making authority to lower levels requires confidence that front-line decision-makers will make good decisions. This, in turn, requires the boundaries surrounding competence and information to be loosened. Accurate information, combined with the well-developed competence to make decisions, ensures trust-worthy employees.

The following actions for shifting authority downward are intended to allow Naval Special Warfare to span vertical boundaries and increase NSW responsiveness and flexibility:

- Challenge current decision-making assumptions.
- Use town meetings to shift authority.
- Shift leadership roles from controller to coach. (Modified from Ashkenas, p. 91)

(1) Challenge current decision-making assumptions. Healthy vertical boundaries puts decision-making where it makes sense; it seeks to shift responsibility and accountability to where it is both necessary and appropriate. Shifting authority requires organizations to question their assumptions about decision-making.

> Most organizations are infused with assumptions about who can and cannot make various types of decisions. Some are based on rational analysis, but many of them are "historical artifacts" . . . or long-standing images of role and competency ("That's a senior management decision!") Yet often, when these assumptions are changed, the previous way of doing things looks ridiculous in retrospect. . . . To move decisions to the right level, managers need to challenge their hidden assumptions: They can start by asking themselves a series of simple questions:

- Who has the information and skills necessary to make sure that this is a high-quality decision? Have these people been involved in the decision?
- If you had to trust one person in the organization to make this decision, who would it be? Has this person been involved in the decision?
- Who will be required to implement and carry out this decision? Have these people been involved in making the decision? (Ashkenas, p. 92)

This effort requires leaders to constantly reexamine why they are making a particular decision and to delegate decision-making authority when it makes sense. Decision approval is an area ripe with possibilities for delegation. What keeps a particular decision from being approved at a lower level? What value is added to the decision by the approval process? How often have decisions been reversed or declined? If there is no value added and decision recommendations are rarely questioned, then the approval process is a waste of time and effort. Leave chits, purchasing orders, and other routine administrative rubber-stamping are areas worth consideration.

(2) Use town meetings to shift authority. Although town meetings may have a negative, "touchy-feely," politicized connotation because of "town-meeting" political rallies and debate formats, the term is a metaphor for collaborative vehicles that create system-wide forums that introduce wide-ranging input and interaction into the decision-making process. Small group meetings that generate ideas for process improvement and organizational change precede these forums and provide the input that serves as action items. These ideas are then brought forward in a forum that contains a broad cross-section of the organization. The ideas are debated, modified, and acted upon by appropriate authority at the town-hall meeting; the decision thought process becomes an interaction between decision

makers and the group. Participants are self-selected and they are working on issues important both to them and their organization; this provides a passion that helps promote change. Leaders are immediately accessible and decisions are made in real time. The ultimate decisions are assigned to a "champion" – supporter/advocate/guardian – who insures follow-up and implementation. Although, town meetings may not be the best type of collaborative mechanism for NSW, organization-wide input, debate, and involvement along with a transparent decision-making process, whatever the eventual format, are important to boundary-spanning and organizational transformation. The implementation of NSW Force 21 is an excellent opportunity to utilize small working groups and NSW-wide collaboration to explore opportunities for improvement and refine transformation initiatives.

(3) Shift leadership roles from controller to coach. "The role of manager, executive, and leader changes drastically – from controller and authority figure to stimulator, catalyst, cheerleader, and coach." (Bossidy, p. xx) "Instead of controlling, directing, evaluating, and ordering, the middle manager must facilitate, coach, and counsel, mentor, translate strategies into goals, and design processes for joint assessment." (Ashkenas, p. 56) The first step in this shift is for leaders to clearly differentiate between the old and new roles. Leaders should reflect on the characteristics of a good coach and seek to apply these attributes and the coaching mentality at their level. "Such characteristics will include helping employees discover how to perform, not telling them what needs to be done; facilitating and leading by example more than edict and earning respect from action more than title; working with and for employees; laying out game plans then letting

the employees execute the plans; and disciplining as teachers, to help employees learn and improve, rather than auditors, to catch and punish inadequate behavior." (Ashkenas, p. 97)

Changing leadership roles and styles is not easy. While leaders may be willing to share power, to empower their subordinates, to listen to other's ideas and input, they are often less willing to change their leadership styles or familiar roles in order to facilitate the necessary "give and take." It is unlikely that the interaction between leaders and those they lead will be altered without individual, personal change in the leaders themselves, changes in leadership roles and styles.

Once critical leadership characteristics are identified, training efforts can be integrated into the NSW-wide training program. These efforts would include the incorporation of training modules into operational exercises and unit-level training, as well as within the NSW Force 21 and Project 21 implementation process. Facilitation, team building, and group problem solving skills can be developed through the use of collaborative teams that provide input into NSW change efforts.

d. Rewards

Rewards have two primary functions: to say thank you and to motivate people to act in a certain way. Yet, traditional bureaucratic organizations closely link awards with vertical positions. As a result these organizations are rewarding jobs not people. This is true of both financial and nonfinacial awards. In the military this can be seen in the traditional hierarchy of awarding medals – Navy Achievement Medals are normally awarded to enlisted personnel and junior officers while Navy Commendation Medals are awarded to midgrade officers and senior enlisted and Meritorious Service

Medals are reserved for senior officers. While this is not always the case, there is an identifiable hierarchical trend regarding non-combat medal awards. "When rewards are based on position, they send the message that what counts is vertical advancement up the hierarchy. When rewards exist to recognize and encourage superior performance regardless of level, boundaries become more permeable and the hierarchy becomes healthier." (Ashkenas, p. 49) These self-explanatory practices are familiar to many military leaders:

- Base rewards of performance and skill.
- Share rewards up and down the organization.
- Use nonfinancial rewards. (Ashkenas, p. 100)

While some commands use these practices to encourage desired performance, others retain the traditional mindset of linking rewards with position. Rewards affect vertical boundaries only when they are given for performance, not position. Rewards must be tied to performance and desired behavior. Asking leaders to act like coaches – desiring collaboration, facilitation, and teamwork – yet rewarding only individual accomplishments sends mixed messages.[27] Naval Special Warfare's communication plan should articulate desired characteristics that are aligned with transformation efforts and organizational goals, promote the use of rewards to encourage the development of these characteristics and consistently publish award announcements community-wide, highlighting a performance-not-position mentality.

e. Unavoidable Interconnectedness

The critical boundary dimensions – information, competence, authority, and rewards – are mutually supportive and interlinked. Adjustment of a single dimension rarely changes the permeability of a boundary. For example, training makes

[27] See Kerr (1975), On the Folly of Reward A, While Hoping For B.

employees more competent, but if they cannot apply that competence through increased decision-making authority, their newly found competence is wasted. Giving employees more information without the opportunity to act on the information is of little value. Granting decision-making authority without providing the competence and information to make good decisions is not empowerment it is closer to entrapment. Training, tools, and rewards must accompany decision-making authority.

2. System Components for Loosening Vertical Boundaries

System components – alignment, commitment, a cumulative approach, and a shared mindset – help ensure change over the long-term while complementing and supporting momentum-building initiatives throughout the four critical dimensions.

a. Align Healthy Hierarchy Concepts with Business Strategy

NSW leaders must connect every effort to loosen rigid bureaucratic hierarchies to NSW operational results. Initiatives like NSW Force 21 (or future other "reengineering" programs), Project 21, as well as efforts to effect stakeholder involvement, "employee" empowerment, and everything else must affect NSW's strategic goals and not be ends in themselves. Future goals must be clear and definitive if initiatives are to be guided by and support organizational objectives. The driving vision of Naval Special Warfare in the future must paint a descriptive picture, explicitly defining the "customers" – SOCs, Fleets, Theater Commanders, Country Teams, other agencies, etc. – that it expects to serve; the "products" – operational units, unconventional capabilities and solutions, etc. – that those customers will need and/or demand; and the technology required to serve those customers and provide those

products; as well as highlighting the unique competitive advantages that NSW might develop and exploit.

As discussed in Chapter V, such clarity and definition in times of turbulence and rapid change is difficult. Traditional methods of strategic planning are frequently unable to overcome this difficulty to achieve. This type of clear and lucid vision cannot be produced through isolated executive analysis; however, it can emerge over time and through organization-wide effort. If shared meanings are developed throughout Naval Special Warfare, if diverse stakeholder perspectives are sought and blended, if NSW tirelessly experiments with the intent to try many things and keep what works, if the interconnectedness of many initiatives is recognized and responsive adjustments are made, if a cumulative approach to organizational adaptation is pursued, then the eventual tipping point will be crossed and a clear and explicit vision may emerge.

The type, purpose, and scope of these initiatives should be defined by the capabilities needed to meet Naval Special Warfare goals. "By viewing organizational initiatives in the context of building capability for the achievement of business strategies, organizations can avoid disconnected initiatives and management fads." (Ashkenas, p. 67)

b. Develop a Sustained and Visible Management Commitment

An unwavering focus on and an unmistakable commitment to organizational objectives by Naval Special Warfare leaders is essential to maintaining alignment and sustaining the progress of change initiatives. All NSW leaders should consistently seek to harvest lessons learned, to identify the impact of change initiatives

on their subordinates, and attempt to get everyone involved and excited about the organization's objectives and the processes to achieve them. Additionally, they should report quarterly about change activities and accomplishments, providing summaries of new ideas and practices developed within their groups. These reports, designed to build stakeholder-wide awareness and promote the distribution of best practices, are an essential part of the NSW communication plan. Additionally, leaders should:

1. Present the NSW Vision, NSW Force 21 and Project 21 overviews to their subordinates, mutually exploring the implications for their units and their people.
2. Spend part of every meeting asking for advice on how to do work more effectively. (Do not, however, create additional time wasting-meetings, simply incorporate these strategies into currently scheduled meetings.)
3. Make frequent and informal visits to the deck plates – get face to face with their people and their problems. Encourage subordinates to come forward at any time with ideas for improving work.
4. Hold all-command, all-department, and all-claimancy meetings via teleconferencing to share information and lead to action. (Again, discriminate between behavior-changing, vital communication and routine information passing.)
5. Form process improvement teams to address areas important to team members and dedicate significant time each month to receive and respond to team input.
6. Implement simple, but effective automated suggestion systems guaranteeing a response within seven days.
7. Engage in a unit-specific problem identification process to remove barriers to change in each command. (Modified from Ashkenas, pp. 68-69)

c. Take a Cumulative Approach

Organizational adaptation is a long-term process. Short-term initiatives address immediate issues; yet, they must align with long-range objectives. A cumulative approach is critical to transforming Naval Special Warfare from an industrial age organization into a prototype for military organizations in the information age. As The Tipping Point discovered, a sea change transformation often follows many small

initiatives. Complexity theory argues that intentional design and single events are not the source of systemic change; instead, emergence and cumulative, interactive effects rule complex systems. (See Chapter IV.)

Without a cumulative approach, NSW will drift from initiative to initiative with "Band-Aid" solutions, sequenced and scheduled to achieve results within a single Commanding Officer tour (two years) These short-term fixes are intended, to address long-standing organizational, behavior, and process challenges, however they often end up as incomplete, withering, and eventually abandoned projects as a new Commanding Officer launches fresh programs. Adopting a cumulative approach, NSW must acknowledge that adaptation to the 21st century is a long-term effort, closer to a ten-year endeavor than a two-year fix. A cumulative approach, sustained over multiple changes in command must rely upon a shared mindset.

d. Develop a Shared Mindset

Chapters IV and V discussed shared meanings, culture, and core ideology. These are all part of a shared mindset that establishes acceptable behavior, guides long-term objectives, and aligns short-term initiatives to those objectives. A simple test of Naval Special Warfare's shared mindset would be to ask every member of the organization (via e-mail) to list the top three things NSW wants to be known for by its customers. What should be the automatic and consistent response of anyone who receives NSW products and services? Answers from throughout NSW, divided into senior leadership, mid-management, and deck-plate responses, should be sorted into clusters of common answers. This test will determine the extent of an NSW shared mindset and highlight how deep the mindset has spread from senior leadership down to

the deck-plates. A robust shared mindset could be considered to exist if 75 percent of the answers are in the top three clusters. This test should be repeated annually to determine organizational progress in developing a shared mindset.

The authority, information and competence to act are confined by NSW's vertical boundaries. Loosening those boundaries increases flexibility and individual as well as cumulative responsiveness. Horizontal boundaries affect the ability of NSW to leverage resources and create value throughout NSW, combining these newly developed competencies and increased flexibility across organizational boundaries.

C. LOOSENING HORIZONTAL BOUNDARIES

"To create boundaryless horizontal organizations, companies must see themselves as sets of shared resources and competencies that are mobilized, in different ways at different times, to meet customer needs." (Ashkenas, p. 145) However, traditional organizations with rigid functional divisions resist and undermine attempts at boundary spanning. The natural reaction of traditional organizations is to modify the organizational chart, to reorganize functional boundaries when faced with dysfunctional horizontal boundaries. Signs of dysfunctional boundaries include: uncoordinated actions, slow, sequential procedures, protected departmental turf, resources, and authority, sub-optimization of organizational goals, least-common-denominator products and services, and the "enemy-within" syndrome where internal battles consume time and resources. (See Ashkenas, pp. 115-122.) Frequently, this has little long-term effect because this approach addresses symptoms instead of their causes. Applying a structural solution to problems created by disjointed processes and misaligned behavior will do little to adjust destructive horizontal boundaries.

This is not a condemnation of NSW Force 21, a necessary and important restructuring initiative. With this movement away from its legacy, Vietnam-era structure, Naval Special Warfare has taken a significant step towards better resource mobilization. NSW Force 21 and Project 21 are valuable steps in the right direction; they are not, however, end states - solutions in and of themselves. Organizational boundaries, the underlying dynamics that affect Naval Special Warfare's speed, flexibility, integration, and innovation, remain to be addressed. No matter the structure, looser horizontal boundaries are a necessity.

Traditional organizations often attempt to overcome rigid horizontal boundaries through cyclic centralization-decentralization initiatives. Through centralization of resources and decision-making they hope to eliminate turf battles and poor communication. However, centralization limits speed, flexibility, and responsiveness and eventually the cycle returns to decentralization. Military organizations debate the centralization issue as well; a familiar truism claims that every military leader wants decentralization – more freedom of action – down to his level but insists on centralization – more oversight - for those under his or her command.

> The question, "Should we centralize or decentralize?" is the wrong question for organizations to ask. Therefore, the answer to it will never be right. Instead of looking for structural solutions to what is fundamentally a process challenge, organizations should be asking how to permeate horizontal boundaries and improve speed, flexibility, integration, and innovation.
>
> To reframe the question, management must first view the organization not as a set of functional boxes but as a set of shared resources and competencies that collectively define the organization's range of activities. Only then can management address the more fundamental question: How does the organization create *processes* to ensure that all its shared resources and competencies – arrayed across the horizontal spectrum – create value for customers? (Ashkenas, pp. 126)

Structure is important; however, structure defines boundaries. Crossing horizontal boundaries, regardless of how they are defined, requires an unshakeable customer focus, a commitment to cross-functional teamwork, and an integration of departmental resources. For Naval Special Warfare, this requires:

1. A uncompromising concentration on the customer – Theaters, SOCs, Fleets, Country Teams, etc.

2. A dedication to and orientation on the operational unit – the Naval Special Warfare Squadron

3. The creation of cross-functional teams that support these squadrons and the processes that produce them.

It requires loosening horizontal boundaries and integrating resources, both NSW resources and outside resources. The old functional model must be adjusted to looser boundaries, greater cross-functional integration, and increased teamwork.

> Loosening horizontal boundaries, then, calls for integration, not decentralization; process, not function; and teamwork, not individual effort. When the organization is viewed integratively as composed of shared resources, it puts an end to the structural questions about power, authority, and priority raised in the centralize/decentralize debate. Shared resources are not about which horizontal function has power but how the organization uses processes to mobilize resources, solve problems, and meet customer needs. In other words, process is more important than function. (Ashkenas, p. 127)

The groundwork for loosening horizontal boundaries is laid with small actions, cumulative successes, and gradual shifts in perception and understanding. Abstract concepts - permeable boundaries, resource leveraging, collaboration, etc. – require concrete illustration. Tangible examples of desired organizational characteristics and personnel behaviors are essential to create broad acceptance of NSW change initiatives.

Project 21 and the Naval Special Warfare Support Center present excellent opportunities to create new mental models and display these concepts in action. Small, cross-functional Support Center teams established on an ad-hoc basis in support of exercises and contingencies can begin to examine and change the process of operational support. The Support Center will provide a mechanism to encourage and teach cross-functional teamwork, boundary spanning, and collaboration. Experience on teams that must routinely leverage resources across boundaries while addressing real organizational and operational problems is an irreplaceable learning vehicle. Additionally, the implementation of NSW Force 21 provides the opportunity to address important organizational issues that can only be solved through cross-functional effort and multi-stakeholder input.

Before launching these first attempts at boundary spanning, measures of success must be defined. "Measures of success must be established at the beginning of an effort if they are to shift processes. In essence, they serve as goals, stakes driven into the ground that people can reach only through loosening horizontal boundaries." (Ashkenas, p. 137) Success factors could include reduced cycle time for NSW Support Center-assisted mission planning and higher customer satisfaction, both internal customers (the NSW Squadron) and end-users (SOCs, Fleets, Theaters, etc). Customer satisfaction can be determined by collecting data from focus groups, surveys, and targeted interviews.

Throughout Naval Special Warfare, horizontal boundaries should be examined and adjusted.

1. Critical Horizontal Boundary Dimensions

Section B, above, illustrated how the critical boundary dimensions – authority, competence, information, and rewards – affect vertical boundaries. In order to adjust horizontal boundaries these same critical boundary dimensions must be aligned to the objective of leveraging resources throughout Naval Special Warfare. In adjusting horizontal boundaries leaders will move "switches" from controlled to loose in the four critical dimensions:

- *Competence* will shift from an orientation on function to one of process. Team-building and collaborative skills must be developed and enhanced.
- *Information* flows shift from the constrained channels of the organizational chart to a free-flow of cross-functional information sharing.
- *Authority* vested in functional departments will be shared with cross-functional teams
- *Rewards* move from being based on functional performance achievement of departmental goals, to rewards based on cross-functional team and process performance and broader organizational goals.

a. Competence

Competence within rigid horizontal boundaries is centered on specialization and standardization; each division, department, or command maintains an internal focus, developing competencies that improve functional performance. This function-orientation can become a purpose unto itself, succumbing, ultimately, to a myopic function-first mentality ("What is best for my department/command?") Alternatively, in a boundaryless organization competence rises above function and is oriented to the process of value creation ("What is the best way get the optimum product

and serve the customer?") The following actions are examples of ways to increase competence across horizontal boundaries and, as a result, loosen horizontal boundaries:

- Orient work around core processes.
- Create shared services for support processes.
- Tackle both processes through targeted teams.
- Develop organizational learning capability.

(1) Orient work around core processes. This shifts the emphasis of the organization from an internal, departmental focus to an external, customer focus, from department or command effort to cross-functional process work. It requires the definition of core processes, the identification of stretch-goals to improve those processes, and the assignment of process leaders to guide them.

(a) Define core processes. Examples of NSW core processes are offered below. These processes are presented in business terminology with the purpose of temporarily breaking away from a military frame of mind that has long been accustomed to thinking in terms of functions and staff codes. For example, it is a natural military tendency to assume training, a critical military function, is a core process. However, from a broader perspective training is a component of a larger process of product development and production.

The following examples are intended as a starting point for a community-wide dialogue in a search for definitions of core processes that best suits Naval Special Warfare's vision and objectives. In the end, it is likely, and fitting, that these definitions will not reflect business terminology. They ultimately will find more appropriate expression in terms that reflect the shared mindset of NSW.

> To define your company's core processes, ask: Who are our key customers? What are the flows from input to output that add value to these customers? What are the main products or outputs that our

customers look to us to provide? What steps are necessary to produce these outputs?." (Ashkenas, p. 147)

Examples of Naval Special Warfare core processes include:

- Product development and production: the processes by which ideas become products and services. For Naval Special Warfare, this includes NSW Squadron training, mission planning, capability development and operational experimentation.

- Order fulfillment: the processes by which customer requirements are entered into the organization and satisfied. This would include NSW Squadron deployment scheduling, mission tasking, exercise coordination, etc. In the commercial sector this would also include customer acquisition. For Naval Special Warfare this is an underdeveloped element of this process, for understandable reasons. Any attempt to "drum up business" could be misinterpreted as crisis or war mongering or, at best, a myopic manifestation of the law of the tool where NSW is a solution in search of a problem. ("Regardless of the problem or context, Naval Special Warfare is the answer.")

Despite this concern, an unconventional mindset can develop a new appreciation of both strategic needs and strategic opportunities. Furthermore, responding to these novel insights, NSW could discover opportunities "for new problems to be solved, whether or not they have previously even been recognized as problems, what might be called 'latent demand'." (Cooper, p. 120. See also Chapter II, Section B (4) of this thesis.) In addition to discovering and meeting the "latent demand" of customers, this approach would facilitate pre-crisis analysis and preparation –

conceptual development and mission-scenario exploration integrated into NSW Squadron pre-deployment training. This anticipatory resource leveraging would result in the pre-crisis development of contingency "packages"; these resource bundles would be ready for immediate use as a crisis crossed the threshold of "customer" interest. This concept will be further explored later in a discussion concerning targeted process teams.

- Purchasing: the processes by which supplies are ordered and acquired. For NSW, this would entail procurement, supply, logistics, and comptroller functions in a process of financial and material acquisition and management.

- Internal support services. Naval Special Warfare also has processes that focus on internal customers – NSW operational units and staff departments. Internal support services include: training and development (excluding operational training), information technology support, Weapons, Diving and Air support departments. These processes can be managed through shared service groups, a major component of NSW Force 21. This topic is discussed in the next section, Section A (2)

(b) Set customer-focused stretch objectives for each process. Examples of Naval Special Warfare customer-focused stretch goals include:

- Increased responsiveness of NSW Squadrons. This includes responsiveness to changing theater requirements, in essence, quickly refining and customizing NSW capabilities to meet shifting or emerging requirements, and also increasing Squadron operational and tactical responsiveness through innovative and unorthodox deployment and insertion methods as well as original operating procedures, a prime focus of Project 21. These goals should, where

possible, be stated in concrete terms, for example establish a 21 day timeframe to test and develop a new, tailored NSW capability or a 30-percent reduction in tactical response time.

- Greater NSW theater impact. To achieve greater relevance and high-value impact NSW would need to link Naval Special Warfare stakeholders in a NSW Network. These stakeholders would include: in-theater NSW staff officers, the representatives of NSW on various staffs, NSW Support Center teams and operational units as well as Theater Commanders, their staffs and numerous outside agencies. The NSW Network would enable stakeholders to create virtual teams[28] to anticipate Theater requirements and search for and seek to solve difficult Theater problems. This is the same "customer acquisition" sub-process discussed in Section C.1.a (1), above.

Setting ambitious stretch goals is necessary because it moves NSW personnel away from a maintenance or process-improvement mentality and forces them to challenge current methods, to take a fresh look at old operating assumptions and examine alternatives to standard procedures. The best source of input for developing these stretch goals is the operational commander. Naval Special Warfare staff officers assigned the Fleets, SOCs, and Theaters should examine, understand, and communicate their respective command's measures of success and performance assessments as they relate to NSW. Additionally, they should be the experts about satisfying both urgent and latent Theater, SOC, and Fleet demands. This Naval Special Warfare "customer focus" is currently lacking. NSW operational

[28] These teams are "virtual" in the sense that they are widely dispersed geographically, yet united in purpose, acting concurrently, and coordinated via the World Wide Web.

staff representatives are often inundated with staff functions and local issues, habitually isolated from the greater NSW organization and seldom integrated into community initiatives and processes. As a result one, of the best resources for process improvement and initiative alignment is under utilized and often ignored.

(c) Assign process leaders. Process leaders should be identified after Naval Special Warfare has identified its core processes and developed customer-focused stretch goals. These leaders would have clear accountability for their assigned process or sub-process, for example, the product development process leader would be responsible to ensure that all necessary NSW resources were applied to NSW Squadron training, mission planning and capability development. Process leaders would be responsible for assisting and maintaining the flow of information, materials, or resources across NSW boundaries. This assignment would be in addition to an individual's primary functional or departmental. As a result, process leaders are both functional and cross-functional specialists.

(2) Tackle processes through targeted teams. Contributing to a horizontal process that crosses NSW boundaries, these teams would include members from multiple NSW commands and external commands drawn from varied billets and departments. Team members would share accountability and goals and develop standard operating procedures that cut across and rose above organizational boundaries. Similarly, team members would share measures of success and rewards for successful work. By nature, these teams are customer focused; individual departmental or command priorities should yield to process and organizational goals.

The example of virtual theater teams, discussed above, is continued here with an illustration of a Central Command – CENTCOM - virtual team. This targeted process team, drawn from multiple commands and disciplines, would search out and seek to solve difficult theater problems thorough unconventional and unorthodox approaches. Such a team might consist of:

- Theater staff officers – including NSW, other DOD and civilian personnel – from U.S. Central Command, Special Operations Command, Central (SOCCENT), and 5th Fleet. These team members are representatives and advocates for their commands – the customers.
- Staff representatives with CENTCOM responsibilities from U.S. Special Operations Command Central, Naval Special Warfare Command, and Naval Special Warfare Group One (NSWG-1). These team members provide the linkages to Naval Special Warfare and special operations resources.
- A targeted process team assigned to the Naval Special Warfare Support Center that provides the communication conduit – websites, chat rooms, databases, etc. – and the continuity necessary to ensure progress and capture lessons learned despite the rotation of members in and out of the virtual team.
- One or more operational NSW Squadrons or Task Units preparing for deployment to CENTCOM. Squadrons are the "product" supplied by NSWG-1 to Theaters as well as the front line supplier of NSW products, conducting unconventional operations and innovative solutions to complex military problems. It is at this level where concepts will be refined and capabilities developed.
- Other *ad hoc* representatives, as necessary, drawn from various agencies, government laboratories, and civilian agencies.

This team would have the necessary resources, drawn from across horizontal and external boundaries, to identify pressing theater issues and "latent demand," examine novel insights and opportunities for unorthodox solutions and conduct operational exercises and experiments closely linked to theater demands. This virtual team is an example of a small part of an expansive, future NSW Network that takes advantage of information age technology and looser organizational boundaries to leverage resources for maximum effect.

(3) Create shared services for support processes. NSW Force 21 seeks to do exactly this. It removes all of the support functions – training, diving, ordnance, air operations, etc. – that were located at individual SEAL Teams and combines them into shared service units. These smaller SEAL Teams are now exclusively operational units, instead of training commands. As opposed to training, manning and equipping SEAL Platoons for deployment, SEAL Teams now receive training, equipment, and support services from shared service units and deploy as NSW Squadrons.

Under Force 21 the process users, NSW squadrons, should control these shared services. Shared service units exist for the sole purpose of supporting NSW Squadrons and all procedures and processes to provide that support should be designed for the convenience and benefit of the squadrons. While this is an obvious point, bureaucratic tendencies often seek internal efficiency and convenience, less departmental work and effort, at the expense of the end-user. Allowing the Squadrons to define the services they require and pull resources when they need them should be an explicit design factor of NSW Force 21.

Shared services fall into two basic categories: transaction-based and transformation-based activities. The difference between these two categories of shared services should lead NSW Force 21 implementers to develop different organizational and process models for each type of shared service.

Transaction-based activities are routinely administrative. Within NSW Force 21 these activities would include equipment maintenance and issue – formerly Air Operations, Diving, Ordnance, and Supply Departments at SEAL

Teams, as well as personnel support functions (administration functions and career counseling) Shared service units that provide transaction-based support should be organized as centers of scale. These centers reduce cost and manpower requirements through consolidation and standardization.

Transformation-based activities are non-administrative, non-routine activities that require deep-knowledge, individual expertise and continuous adaptation. NSW Squadron training, NSW Support Center activities, as well as support to NSW Squadrons from various operational attachments, i.e., Mobile Communications Team (MCT), Cryptology (CT), Explosive Ordnance Disposal (EOD) and advance logistic teams, are examples of transformation-based activities. This type of support should be organized as centers of expertise. Centers of expertise provide much closer interaction and greater person-to-person contact than centers of scale. Centers of expertise improve services through leveraging operational insight, intellectual capital, and institutional knowledge across NSW.

(4) Develop organizational learning capability. Chapter V discussed the learning school within strategic planning and highlighted the lessons of emergent planning: strive for continuous change and progression; pursue tactical shifts and partial solutions; and build organizational awareness and consciously structure flexibility. These are important lessons for the 21st century. However, learning without application is useless; learning must be retained and passed across boundaries and time. Localized learning is insufficient to leverage NSW investments in experience. For example, military exercise files, after-action summaries, and post-deployment reports painstakingly document lessons learned. Unfortunately, the learning is too frequently

localized and short-term. A review of any NSW exercise file or series of post-deployment reports over a five-year period would likely uncover the same lessons learned year after year. Instead of five years of learning these files would document a single year's worth of lessons repeated five times. Without an organizational learning capability, solutions will be endlessly recreated but little change or improvement will take place.

Naval Special Warfare must build a commitment to learning. Such a commitment would seek to reward innovative ideas. Naval Special Warfare's communication plan would include the generalization and dissemination of initiatives and lessons learned. Individual initiatives must be generalized to other Theaters and situations if they are to make a significant impact. Experimentation and continuous evaluation of processes and procedures should be routine. Continuously challenging the status quo, questioning why things are done in a certain way, and a refusal to accept a one-best-way mentality must be encouraged by and expected from every part of NSW. Consciously planning the rotation of personnel across functions and through *ad hoc* teams will increase organizational leaning and aid in the transfer of best practices. NSW cross-functional rotations would include assignment to SEAL Teams, Special Boat Units, SEAL Delivery Vehicle Teams, and temporary duty with Theater staffs and Country Teams, for example, 30 days of staff augmentation.

Part of building a commitment to learning is a healthy tolerance for failure. This will be a significant task in a military and a society geared for success. Even military exercises and operational experiments often appear to place a higher priority on success, the absence of mistakes and problems, than upon learning. A

constant quest for "success" can create risk aversion and restrict ideas. Conversely, small failures can increase problem recognition, encourage deeper examination of assumptions, concepts, and procedures as well as increase risk tolerance. Failures must be milked for learning instead of punished. A simple test to uncover risk aversion and fear of failure would be to conduct a quick review of NSW training evolutions, exercises, and operational experiments. How many of these evolutions registered a failure? Was the tactical and operational objective achieved a significant percentage (90, 95, 98 percent) of the time? Were the individual and team training regimens and competence levels, the operating assumptions, the tactical procedures consistently appropriate for every mission and evolution? While this may signal phenomenal operational excellence, it more likely represents a dangerous satisfaction with the status quo and an unquestioning acceptance of legacy processes and procedures. "Push to the point of failure," a weightlifting maxim that acknowledges the fact that failure increases growth, is a worthy objective of NSW training and experimentation.

b. Information

The Naval Special Warfare communication plan must span horizontal boundaries. Learning by targeted teams and process groups must be generalized and shared through the communication plan. The insights of forward staff officers, operational unit personnel and varied stakeholders must be captured and leveraged. If they are not communicated and utilized throughout NSW, Naval Special Warfare is destined to relearn the same lessons; innovation and creativity will continuously emerge, only to wither in isolation and later reemerge to solve the same problem. To avoid this fate, mechanisms to share best practices and institutionalize learning must be developed.

These methods to capture critical ideas, information, insights, and competence might include: sharing databases across functions, including e-mail distribution lists, meeting notes, progress reports and groupware technology; publishing cross-functional summary reports, videos, and other communications designed to document progress and suggest future possibilities; and virtual dialogue message boards and chat rooms. The communication plan would coordinate both the method of communication and the message to ensure maximum long-term impact. This type of effort can be visualized as an internal public affairs blitz creating and promoting organizational adaptation.

c. Authority

Shared authority is required to loosen horizontal boundaries. Command and departmental boundaries must be permeable enough to allow resources to flow when and where they are needed. NSW Force 21 recognizes this point in its consolidation of shared services. Consequently, team decision practices must be developed that provide cross-functional teams with the ability to leverage resources regardless of their source or location within NSW.

d. Rewards

Rewards that reinforce looser horizontal boundaries must be based on process and team results. Functional – command and departmental – performance should be determined, in large part, by NSW Squadron successes, process improvement, and SOC, Fleet, and Theater satisfaction. Although individual performance and rewards remain important, horizontal boundary spanning requires encouragement and recognition of cross-functional team achievement.

2. System Components for Loosening Horizontal Boundaries

a. Alignment and Shared Mindset

NSW "customer" focus and process orientation are important aspects of both shared mindset and alignment to NSW objectives and strategy. Naval Special Warfare's entire focus should be on how to best anticipate and serve the changing needs of Theater Commanders, SOCs, Fleets, and Country Teams. NSW staff officers assigned to these customers should frequently present an accurate perspective of NSW from the theater point of view and be the "point man" in a continuous effort to strengthen NSW relationships with operational commanders. These staff officers are the face NSW presents to theater customers as well as the conduit to access Naval Special Warfare resources, products, and services. Ideally, they will be a manifestation of the shared mindset, oriented on processes and dedicated to significant and continuous Theater contribution, that is eventually developed throughout Naval Special Warfare.

b. Sustained Commitment

In the military, Commanding Officers are the embodiment of their command. Their arrival is made known by the announcement not of their name but of the organization they command, for example, "SEAL Team One, arriving." Success and failure of the ship, team, or unit is their personal success and failure. Accountability for that success or failure is ultimately vested in only one person, the commanding officer. Although less encompassing, military authority and accountability is similar for smaller unit leaders and department heads. In such a context, it will take significant personal effort and a shift in traditional concepts of control to commit to cross-functional teams, collaborative effort, and cross-boundary resource leveraging. However, a sustained

leadership commitment is necessary for the success of the greater whole. Naval Special Warfare's relevance in the 21st century depends upon its ability to leverage dispersed resources and act with speed, flexibility, integration, and innovation. This in turn hinges on a sustained leadership commitment.

c. Cumulative Approach

It will take time and considerable effort to break down the walls that separate departments and commands. Distinct functional and command perspectives and procedures must be combined to create cross-functional processes and a shared mindset. Trust and teamwork will be built slowly. A cumulative approach built upon small steps and constant adjustment is the key to crossing horizontal boundaries.

Use of the framework developed in Chapter VI has been illustrated in the sections above. The following discussions concerning external and geographical boundaries will not, for the sake of brevity, be structured within the framework. The same critical boundary dimensions and system components apply to loosening external and geographic boundaries. The process of utilizing the framework for identifying transformation initiatives should be applied to all organizational boundaries as NSW adapts to the 21st century.

D. LOOSENING EXTERNAL BOUNDARIES

Crossing external boundaries was briefly discussed under the topic of targeted teams. Previous discussions concerning the importance of forward staff officers and other external stakeholders in the process of resource leveraging highlights the need for looser external boundaries. NSW staff officers assigned to external staffs – SOCs, Fleets, Theater staffs, etc. – are outside of traditional NSW organizational boundaries.

Traditional concerns over chains of command and reporting procedures have frequently distanced these staff officers from the larger NSW organization. They have been isolated by the traditional view of organizational boundaries. Within this view, each command develops plans and strategies independently or sequentially; joint problem solving and information sharing are often limited; and aggregate resources are not utilized efficiently.

An alternative model within the business world takes a broader perspective and focuses on the entire value-creating system. "Today, given the potentially negative consequences of traditional value chain boundaries, many companies already are looking outside themselves to the entire web of institutional relationships of which they are a part." (Ashkenas, p. 195) For Naval Special Warfare, this would include all the NSW commands that are part of the process that prepares NSW Squadrons for deployment as well as every link in the chain that connects squadrons to the end-users in each theater – SOCs, Fleets and Theater Commanders. The "key strategic task is the reconfiguration of roles and relationships among this constellation of actors in order to mobilize the creation of value in new forms." (Ashkenas, p. 197)

This is no small endeavor. Legacy concepts of command and control, discussed earlier, are an impediment to relying upon organizations and resources outside a clear chain of command. In the military, much like in the traditional business mindset, it is argued with some merit that the assets you clearly control are the only assets you can trust to be available when you need them. Despite these ingrained barriers, external boundaries should and can be crossed; teamwork and external partnerships can be established and relied upon.

As with all boundary adjustments, the steps to looser external boundaries are slow and small. Every small initiative to increase information and resource sharing, joint problem solving and the development of shared measures and rewards will create more permeable external boundaries. First steps would include seeking out joint projects and initiatives that support theater requirements and add significant value to NSW customers, as well as integrating and linking information systems – intelligence databases, shareware, etc. Within Naval Special Warfare this horizontal boundary spanning translates into a much closer working relationship with Fleets and SOCs, their NSW staff members, and NSW commands both overseas and within the United States. The Naval Special Warfare Support Center, targeted process teams, and, ideally, all of NSW should eventually be seen as extensions of theater commands and not merely service or force providers.

The loosening of external boundaries will require altered leadership skills. Traditional methods of control – levers of authority, reward and punishment, and access to resources – are ineffective and counterproductive with cross-boundary teams. Instead, collaboration, building relationships, and joint problem solving are the necessary tools for coordinating units that cannot be commanded. Military traditionalist might dismiss this proposed shift in leadership styles or refuse to accept the ascendance of coordination over traditional command and control; they can do this only by ignoring significant change indicators. For example, predictions that network forms of organizations will continue to multiply,[29] Alvin and Heidi Toffler's speculation about "deep coalitions." (see Chapter

[29] See Chapter III of this thesis and also Arquilla, J. and Ronfeldt, D. (1997), In Athena's Camp, RAND, Santa Monica, CA.

III), increased multilateral military operations, and the Navy's experimental operational concept Network Centric Warfare are but a few indicators that imply a necessary transition to looser external boundaries and altered forms of leadership.

It is not enough to establish closer relationships with theater operational commands; initiating external boundary partnerships is only the beginning. These relationships must be continually assessed, adjusted, and reworked. Loosening external boundaries, like all boundary spanning, is not an event or time-constrained action. It is an ongoing shift in mindset and a gradual development of shared skills. Part of this ongoing effort might include short-term staff exchanges and augmentation of forward-assigned NSW staff officers. These assignments will provide numerous NSW personnel a new perspective, a view from the customer's own eyes, of theater requirements and Naval Special Warfare relevance.

This new perspective will be aided by a new approach to NSW staff assignments. Naval Special Warfare personnel assigned to external staff billets and overseas SOC and Fleet component commands – forward-based Naval Special Warfare Units – should be seen as "client advocates," linked to the NSW Network as terminal nodes. This new attitude would require NSW personnel to make "a profound shift in approach, from pushing products to being teachers and consultants." (Ashkenas, p. 244) Moving beyond "selling" NSW capabilities and representing Naval Special Warfare as an isolated staff code or subordinate command, these terminal nodes in the NSW Network would become conduits to the larger NSW organization with the ability to leverage NSW resources in order to meet theater

requirements. This is a much deeper role than acting as a service or force provider. This mindset asks, "What are the theater problems and issues and how can NSW help address them?" instead of, "How can NSW find operational employment?" This requires closer working relationships between the following NSW Network elements and the end user – Theater SOCs and Fleets:

- Forward NSW staff officers and Naval Special Warfare Units. These terminal nodes in the network provide local detection of opportunities and "client advocacy."
- Naval Special Warfare Command and its component commands – Naval Special Warfare Groups and Special Boat Squadrons, including the NSW Support Center. These organizations would function as a combined central research unit pursuing opportunities and seeking unorthodox solutions to complex military problems.
- Naval Special Warfare Squadrons and their training cadre. These network elements would experiment with, validate, and implement initiatives that addressed theater opportunities and problems.

Loosening external boundaries will be challenging. Developing a shared mindset and aligning diverse initiatives with a compelling vision will be difficult enough within Naval Special Warfare. Crossing external boundaries to build a theater-wide mindset will only increase this difficulty. Yet, external boundary spanning may offer the highest return on investment. It is through this type of collaboration that NSW's fast, flexible, and adaptive forces and unorthodox approach can be applied with maximum leverage. "Organizations that combine these external boundary shifts with more permeable internal boundaries across vertical levels and horizontal functions realize tremendous benefits by becoming faster, more flexible, more integrated, and more innovative." (Ashkenas, p. 257)

E. CROSSING GEOGRAPHICAL/CULTURAL BOUNDARIES

Globalization and the emergence of "deep coalitions." (refer to Chapter III) underscore the need to deal with geographical, cultural, and philosophical boundaries. Arrogance, misplaced pride, parochialism, and narrow vision are recurring barriers that both military and business organizations must overcome in order to span these boundaries.

Naval Special Warfare is familiar with this type of boundary spanning. NSW deploys to every region of the world. Naval Special Warfare personnel conduct frequent training exercises with numerous foreign militaries composed of diverse cultures, religions, and philosophies. However, stronger relationships, better understanding, deeper insights, and greater interaction will likely be required in the future. Moreover, NSW and DOD contact with non-military entities – other government agencies, NGOs, PVOs, etc. – will undoubtedly increase and will require new patterns of interaction. People with many different values and attitudes, often vastly different than those possessed by NSW personnel will staff private volunteer organizations and non-governmental organizations. The cultural gap between civilian agencies and organizations can often be greater than the divide between militaries of different nations and cultures.

The private sector is familiar with this necessity to build relationships that cross cultural and philosophical boundaries. Economic globalization has forced many corporations to search for global leaders and has led to the examination and identification of leadership qualities that span geographical, social, and philosophical boundaries. Ashkenas, et al., identified six qualities of a successful global leader: "an

aptitude for searching and combining things in new ways [entrepreneurship – see Chapter V], the ability to communicate ideas and turn them into action, the command of several languages and knowledge and sympathy for several cultures [termed "area orientation" in the military], honesty and integrity [credibility], the willingness to take risks and experiment, and faith in the organization and its activities. While the precise characteristics of the global supermanager are still emerging, it does appear that the successful global leader sees the larger worldview, is focused on process, and is willing and able to manage global complexities." (Ashkenas, p. 280)

None of these qualities are foreign to Naval Special Warfare. However, their development, successful combination, and full utilization will be critical to the success of future network forms of organization such as deep coalitions or future peacekeeping operations. Table 7.1 summarizes characteristics and competencies that NSW personnel will need in order to excel within deep coalitions and complex, diverse networks likely to evolve in the 21st century.

Global mindset	Personal characteristics	Competency
Bigger, broader picture	Knowledge	Managing competition
Balance of contradictions	Conceptualization	Managing complexity
Process	Flexibility	Managing adaptability
Diverse teamwork	Sensitivity	Managing teams
Change as opportunity	Judgment	Managing uncertainty
Openness to surprise	Reflection	Managing learning

Table 7-1 Global Management Competencies

Integrating diverse functions over time, distance, and culture cannot be accomplished through centralization or the levers of authority. It must be accomplished through collaboration and teamwork. Regular interaction can help

eliminate stereotypes, break down individual barriers, and develop networks of people who develop relationships established on trust and past experience. NSW and DOD should search for ways to include NGOs and PVOs in recurring exercises, encourage them to participate in contingency planning and develop joint initiatives. Additionally, PVOs, NGOs and other government agencies should be included in targeted theater teams (discussed earlier) as appropriate. Every interaction with these diverse organizations should be accompanied by a training plan that seeks to develop competencies necessary for teamwork and collaboration. Early and frequent interaction will improve critical relationships that will be tested in complex crisis situations.

The interaction of military and non-military organizations and personnel is seldom without friction, but such interaction will only increase in the future. A survey of recent contingency and crisis interventions underscores this point. It will be easy to ignore this boundary dimension but the consequences of failing to reach across cultural and philosophical boundaries are significant and growing in the 21st century.

F. SUMMARY

Naval Special Warfare, and all of DOD, must reexamine the current industrial age organizational model that has served so well in the 20th century. New success factors and a dramatically changed environment (geostrategic, social, technical, etc.) necessitate the ability to rapidly leverage resources wherever they may be found. This requires looser organizational boundaries and a significant long-term NSW-wide commitment to organizational adaptation. The successful military organizations of the 21st century will proactively adapt and change; those who fail to proactively

respond to a different world will, eventually, be forced into a rapid, costly, and dangerous transformation in the face of fast, flexible, and innovative adversaries. Naval Special Warfare is ready and capable to develop these 21st century attributes and lead DOD-wide organizational change.

VIII. CONCLUSIONS

This thesis has been an attempt to discern the characteristics and features of future military organizations appropriately adapted to the information age. It champions broad stakeholder collaboration and adjusted organizational boundaries with little perception and no predictions as to the ultimate form of information-age military organizations. The journey has begun yet the destination remains unknown.

A. OF ACORNS AND OAKS

> In 1919 I was the sole person who saw war in the form it would be; yet saw it only as an acorn not as an oak ~ Major General J.F.C. Fuller.[30]

From the stalemated trenches of World War I, J.F.C. Fuller perceived the undeveloped form of future combat. He championed mobile mechanized warfare, convinced of its utility and necessity long before its eventual character would be known. Such is the uncertain nature of transformations and revolutions: their outcome can never be known from the outset for they move beyond incremental change and embrace deep change. "Deep change . . . requires new ways of thinking and behaving. It is change that is major in scope, discontinuous with the past and generally irreversible. The deep change effort distorts existing patterns of action and involves taking risks." (Quinn, p. 3)

Discontinuous change cannot be designed or reverse-engineered. It must emerge. In order to appropriately adapt to an unfamiliar world, traditional planning – matching means with ends – must be supplemented with discovery-driven planning[31] – developing plans for learning what must be known rather than plans for implementation. In an

[30] Quoted in S.L.A. Marshall (1978), Men Against Fire, p. 27
[31] See Clay Christensen (1997), The Innovator's Dilemma, pp. 160-162, Harvard Business School Press

unfamiliar and changing situation critical information must be identified and properly sequenced, assumptions must be explicitly identified and examined; this is the essence of discovery-driven planning. It is also an imperative of organizational life in the 21st century.

This thesis utilizes Naval Special Warfare as an example of the transformation required throughout the Department of Defense. If the promise of the information-age revolution in military affairs is to be fulfilled, the United States military must adjust organizationally to the 21st century. Without organizational change, innovative operational concepts and revolutionary technological developments will be squandered upon an organization hopelessly ill-equipped to utilize them to their full potential. Preoccupied with size, role clarity, specialization, and control, the Department of Defense, failing to proactively adapt, will eventually receive a brutal "wake-up call" to the 21st century from an adversary capable of leveraging resources with speed, flexibility, integration, and innovation. The indomitable heavyweight will find it difficulty to compete in an altered context, where the very attributes that once ensured success are distorted into overwhelming burdens. The transformation will come. Sooner or later, wisely or through great cost, it will come.

B. SUMMARY OF FINDINGS

The findings of this thesis underscore the need for organizational adaptation – adapting to new technology, adjusting to changes in society and geostrategic circumstances, aligning with new strategic necessities.

1. Lessons From the RMA

The coming information age revolution in military affairs will likely be stimulated and influenced by all three of the revolutionary driving forces identified by Jeffrey Cooper – radical technological advances, strategic necessity, and dramatic social change. As a result, the direction and pace of change cannot be known or controlled; it will emerge. To prepare for this unpredictable emergence Naval Special Warfare, leading the rest of the Department of Defense in organizational transformation, must institutionalize flexibility and adaptive response.

2. Insights Concerning Future Conflict

Large platforms, massed forces, and large staging bases with huge supply stockpiles – legacies from World War I and World War II – will become increasingly vulnerable on the future battlefield. An ever-increasing detection and classification capability, culminating in large sensor grids, will continue the Post-Cold War trend of the "thinning battlefield." The large and the few will transition to the small and the many – cheaper, numerous, and interconnected sensors, command and control nodes, and weapons delivery platforms.

Advanced technology and military dominance will not, however, deter determined adversaries. It is likely that guerrilla conflict and acts of terrorism will increase in both frequency and intensity. Unconventional conflicts – guerrilla warfare, terrorism, state-directed crime (as well as criminally-directed states, e.g., Russia or Colombia), and netwar – will multiply, while the possibility of peer or niche competitors will remain a constant, if largely latent, threat.

Increasing multilateral initiatives and emerging deep coalitions will require increased inter-agency coordination and altered forms of organization; this will include permeable organizational boundaries and networks that defy traditional authoritative command and control.

The key to being prepared for future conflict is a posture of balance and flexibility combined with a broad perspective. Peripheral vision – scanning for hidden opportunities and threats – as well as adaptability will be critical.

3. Responding to Information Age Realities

Complexity theory, utilized as a metaphor and a model for understanding complex, adaptive systems, implies that the Newtonian worldview and traditional assumptions about problem solving should be reexamined. Isolated initiatives and reductionist analysis, that is, viewing a system – in this case Naval Special Warfare or the Department of Defense – as a collection of separate, distinguishable, and individual parts that interact in predictable ways, appear increasingly inappropriate in a complex and interconnected world.

Interconnectedness, complexity, and paradox contribute to a class of ill-defined problems with interlocking issues and constraints. These "wicked problems" defy unilateral action or authoritative directives. Because there are so many interlocking issues bound within a wicked problem, there is often difficulty reaching a definitive statement of the problem. Additionally, constraints and participants are frequently shifting. Wicked problems require collaboration. Often the process of stakeholder interaction is ultimately more important than any specific solution because collaboration naturally builds a self-sustaining capability to address future problems. It builds "social

capital," strengthened network structures, shared meanings, and increased trust and interaction that aid in leveraging resources throughout a community of common interests.

In this information age context, predictability and control are illusions. Rigid policies and procedures must be abandoned in favor of general guidelines and decision rules that help people cope with complexity without reducing flexibility or responsiveness. Naval Special Warfare, as an archetype of future DOD organizations, "must be flexible enough to adapt, creative enough to innovate, and responsive enough to learn." (Crossan, White, Lane, and Klus quoted in Lissack, p. 4)

4. Learning to Plan in an Age of Uncertainty

The current environment requires organizational agility, innovation, and flexibility. Unfortunately, traditional strategic planning is poorly suited for a turbulent and complex environment. Its linear and phased process often delays or eliminates feedback. Furthermore, implementation can be difficult because in today's military planning and implementation are two distinct events performed by different groups. In a rapidly changing and uncertain environment the optimal end-state is never certain. This uncertainty requires new processes and different practices that rely upon emergent strategies that are responsive to opportunities and strategic shifts.

Alternative strategic planning – combining the insights of the entrepreneurial, cognitive, leaning, and cultural schools – is designed to operate in a complex, chaotic, and interconnected environment. It is prepared for and expects both evolutionary and discontinuous change. Instead of focusing on *the* right solution, it is oriented towards learning about the strategic context and its associated problems as well as discovering opportunities. It pursues an inclusive process that seeks to combine alternative frames of

reference into unexpected and valuable combinations. Instead of designing a solution it prepares an organization to deal with unknowable events, to both proactively and reactively address opportunities. It seeks to combine partial solutions and pursues continuous progress and change. Collaboration, system-wide input and participation, is essential to this new planning perspective.

C. RECOMMENDATIONS

Speed, flexibility, integration, and innovation are key success factors of the 21st century. They are essential to leveraging resources throughout Naval Special Warfare and DOD. The framework proposed in Chapter VI is intended to help Naval Special Warfare evaluate and sequence change initiatives designed to loosen organizational boundaries and increase NSW speed, flexibility, integration, and innovation

Boundaries

Critical Dimensions ↓	Vertical Unit level NSW-wide	Horizontal Unit level NSW-wide	External NSW-wide Theater-wide	Geographic national/regional organizational	**System Components** ↓
Information	1. To what extent are the four components in place in our organization? Are they wired together properly? What specific steps should we take to tighten up the wiring? 2. Which of the four dimensions is most out of tune and could use some work? What specific steps can we take to tune this dimension in the proper direction? 3. If we tune one dimension, are there adjustments we need to make in the other three dimensions to keep our boundaries in tune? (Ashkenas, p. 105)				Alignment ↓
Competence					Commitment
Authority					Cumulation
Rewards					Shared Mindset

Figure 8-1 Framework for Change

The following recommendations, summarized from Chapter VII, are examples of action items contributing to NSW organizational adaptation. They are intended, not as a comprehensive proposal, but as a springboard for future change initiative development.

1. General Recommendations

Collaboration across boundaries and among stakeholders is essential in order to develop and sustain initiatives. Every initiative and action should be open to input from throughout the entire system, including internal and external NSW stakeholders. A unifying vision and shared mindset must be developed and cultivated.

Information must be shared from the highest levels to the deck plates and across functional and command boundaries. A comprehensive training program should be developed that seeks to develop cultural and technical competence, developing the skills necessary to act with speed and agility.

Traditional concepts of authority should be examined and adjusted. Authority should be pushed down to the appropriate point in the organization. Unnecessary and time wasting approval processes must be reexamined and altered. Individual rewards must be balanced with team-based and process oriented awards that span functional and command boundaries.

NSW must coordinate and align local and community-wide initiatives to its overall strategy. A long-term (10 year), visible, and unswerving commitment by the entire organization, exemplified in the actions of top leadership, is critical to achieving organizational change. A cumulative approach to change, consistently building upon past successes while examining and learning from every failure, is an essential part of that commitment.

2.	**Specific Recommendations:**	**Location in Thesis**
a.	Utilize shareware – community schedule or calendar software, project manager software, Lotus Notes, etc., to eliminate time wasting meetings.	7.B.1.a (1)
b.	Develop a communication plan. (Multiply efforts by 10.) What info to share, who gets it, when do they get it, how is it shared. Maintain a stakeholder wide virtual dialogue – questions, comments, concerns, etc.	7.B.1.a (1)
c.	Conduct a competence audit.	7.B.1.b (1)
d.	Develop a NSW succession plan with progressive training and mentoring programs.	7.B.1.b (2)
e.	Integrate organizational training into a comprehensive training program.	7.B.1.b (3)
f.	Develop a 360-degree feedback process.	7.B.1.b (4)
g.	Challenge decision-making assumptions. Ask who has final approval authority and why.	7.B.1.c (1)
h.	Use town meetings to encourage involvement and push authority to lower levels.	7.B.1.c (2)

i. Shift leadership roles from controller to coach. 7.B.1.c (3)

j. Tirelessly pursue an unshakeable customer focus, a commitment to cross-functional teamwork, and an integration of departmental resources. This requires: 7.C.

(1) A uncompromising concentration on the customer – Theaters, SOCs, Fleets, Country Teams, etc.

(2) A dedication to and orientation on the operational unit – the Naval Special Warfare Squadron .

(3) The creation of cross-functional teams that support these squadrons and the process that produces them.

k. Orient work around core processes. Define these processes; set customer-focused stretch goals to achieve improvement and challenge underlying assumptions; and assign process leaders. 7.C.1.*a.* (1)

l. Tackle processes through targeted teams. An example of a targeted team is a Theater team targeted on solving complex Theater problems. 7.C.1.*a.* (2)

m. Create shared services for support processes. NSW Force 21 seeks to do this. The NSW squadrons, the service customer, should control these shared services. Additionally, shared services should be organized as centers of scale (supply, diving, air, etc.) or centers of expertise (training, advance logistics support, Mobile Communications Team, etc.) 7.C.1.*a.* (3)

n.	Develop organizational learning capability. Institutionalize a healthy tolerance for failure; "push to the point of failure."	7.C.1.*a.* (4)

D. THREE ENDURING QUESTIONS

This thesis ends as it began, asking three simple but significant questions. Concerning organizational adaptation and the fitness of the United States military in the 21st century, each DOD organization, each individual member of the armed services must ask:

(1) What do I want?
(2) How badly do I want it?
(3) What am I willing to give up to get it?

Organizational adaptation is a long and painful process. Organizational momentum, attachment to the past, and individual preservation will create significant resistance to change. Examining and understanding the objective, to properly position DOD for the 21st century, as well as the considerable cost and the commitment required to achieve this objective is essential to a proactive transformation.

Naval Special Warfare can, and should, lead the Department of Defense in organizational change. Abandoning the legacy industrial age organizational model that exists within DOD, experimenting, and developing new, more appropriate structures and processes for the information age, NSW is uniquely positioned to lead the way into the 21st century.

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